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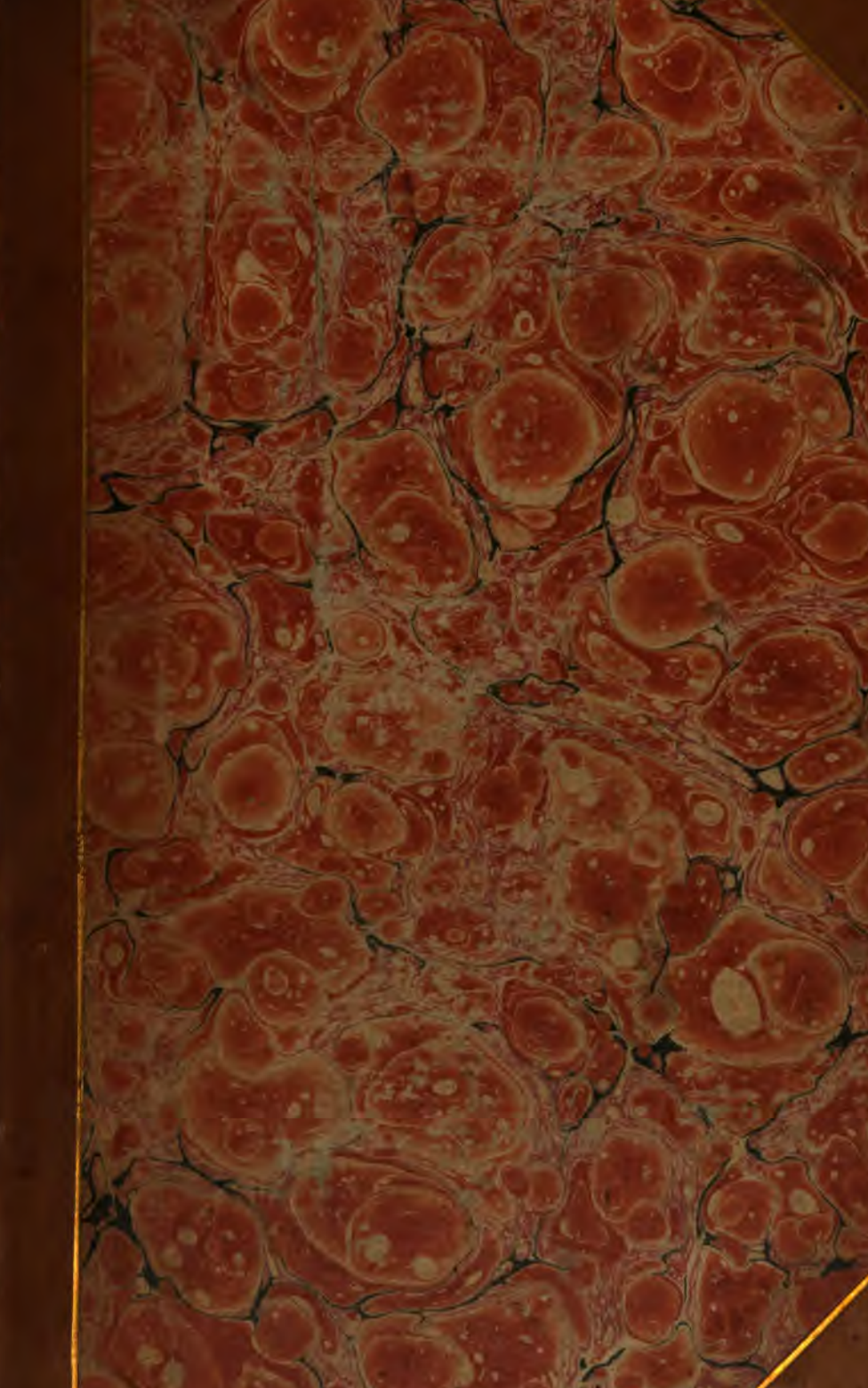
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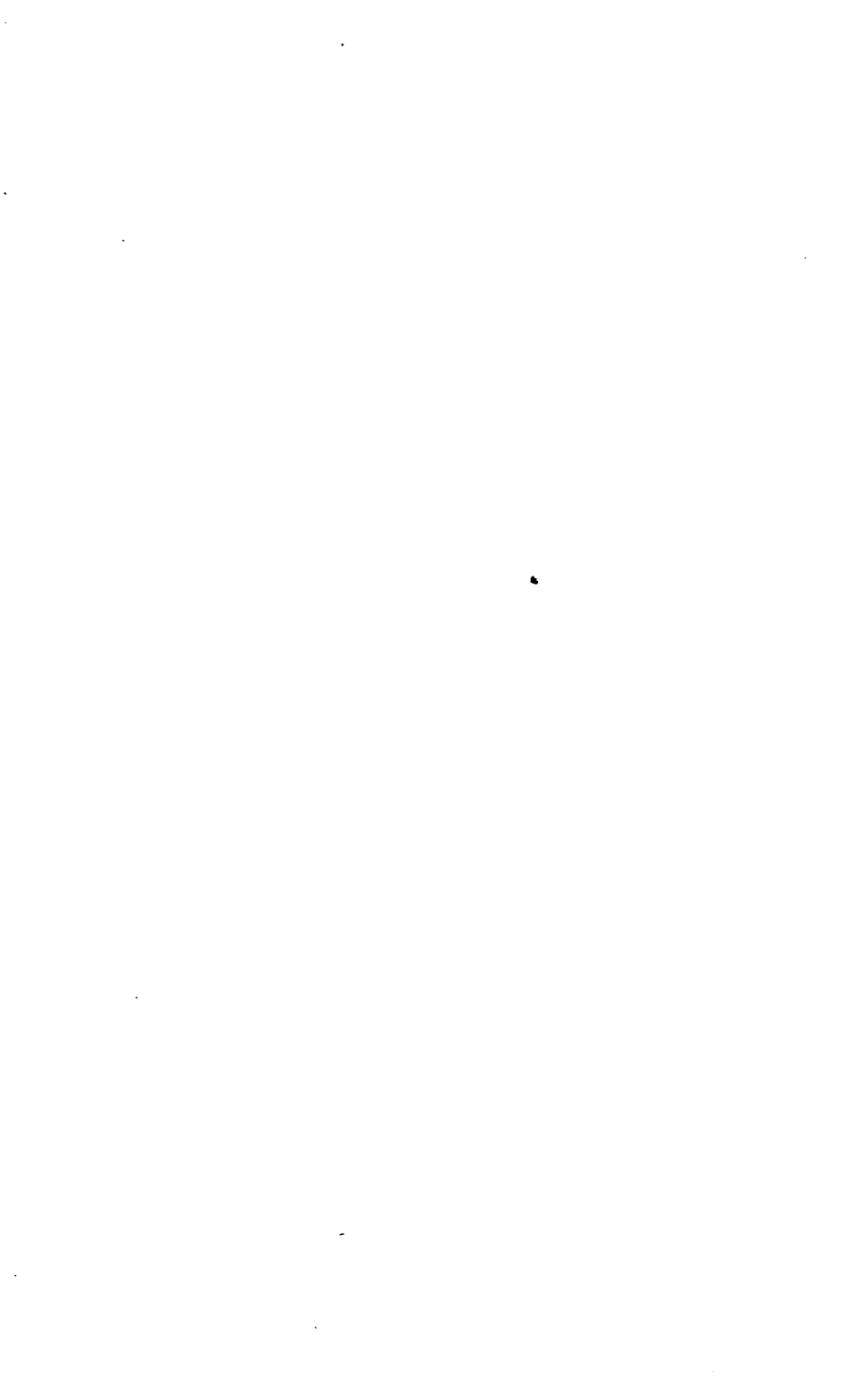


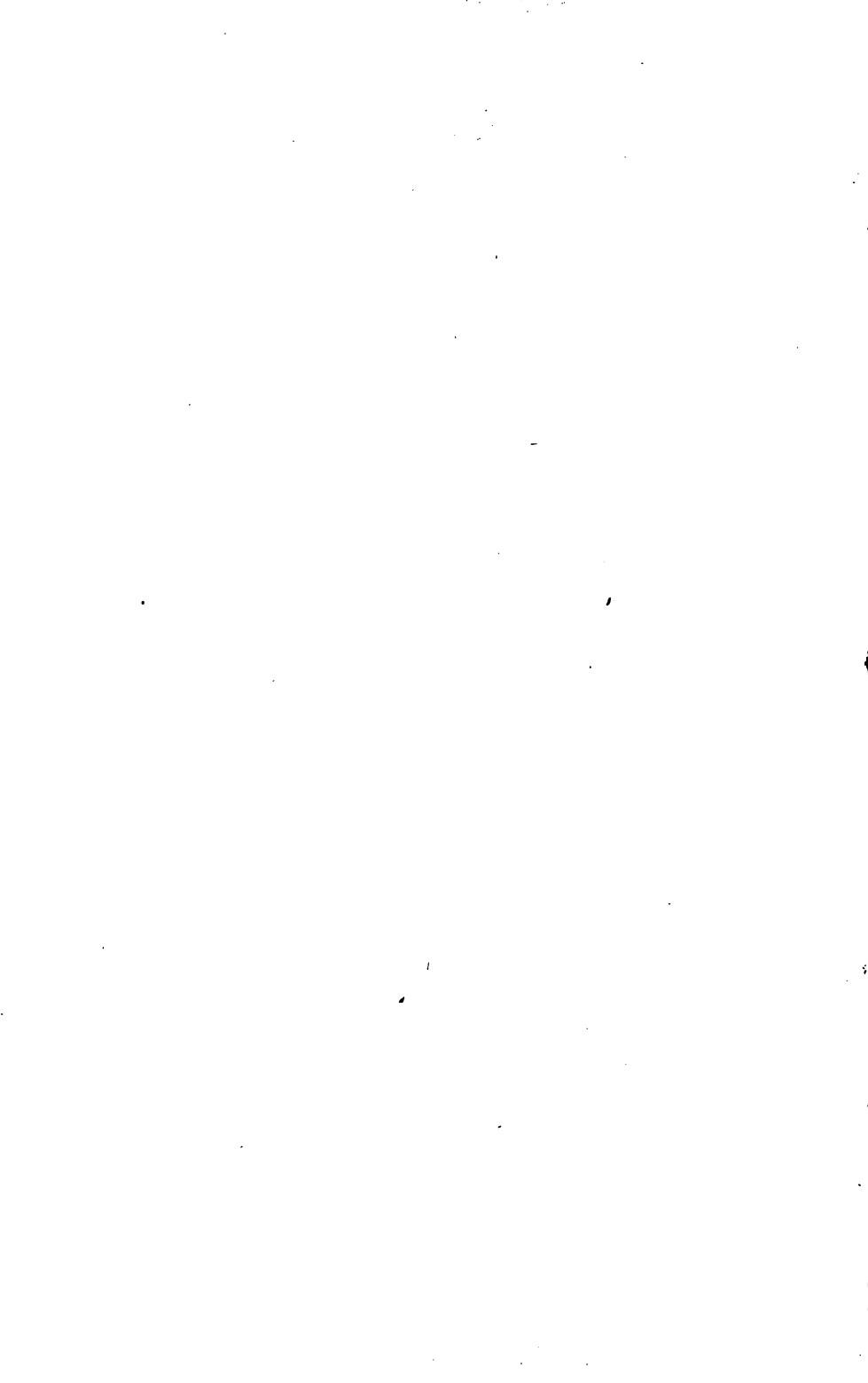
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THE  
**DUBLIN HOSPITAL REPORTS**

AND  
**COMMUNICATIONS**

IN  
**MEDICINE AND SURGERY.**

THE FRANCIS & TAYLOR  
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## PREFACE.

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**THE** Editors cannot allow this volume to meet the public eye without gratefully acknowledging the assistance which they have derived from their professional brethren. Their correspondents who so promptly replied to the letters which the Editors circulated respecting Epidemic Fever, have a particular claim to their gratitude.

The Editors, after having arranged these replies with a view to immediate publication, found them so voluminous that they could not be comprehended within the limits of a single volume without altering the plan of this work, and hence they were induced to transfer them to Dr. Barker and Dr. Cheyne, then engaged in preparing for publication an account of the late epidemic Fever. These gentlemen have published many of the replies,

and have largely extracted from the rest, and thus the object of the Editors\* has been attained, in a manner which they hope their correspondents will not disapprove of.

Contributions to this work may be sent to Messrs. Hodges and M'Arthur, College-green, Dublin, by whom they will be forwarded to the Editors without delay.

\* See Vol. II. Dublin Hospital Reports, p. 273, et seqq.



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**MEDICAL REPORT**  
**OF THE**  
**WHITWORTH HOSPITAL, HOUSE OF**  
**INDUSTRY;**  
**CONTAINING AN ACCOUNT OF DYSENTERY,**  
**AS IT APPEARED IN THE LATTER END OF 1818.**

**By J. CHEYNE, M. D. F. R. S. Ed.**  
**PHYSICIAN GENERAL TO HIS MAJESTY'S ARMY IN IRELAND, &c.**

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IN former times dysentery was more frequent in Ireland than it is at present. Among the febrile diseases to which this country was liable, it stood in order of frequency next to continued fever, which is called by Boate the Irish ague. Boate, in briefly treating of the diseases "reigning in Ireland, and whereunto that country is peculiarly subject," dedicates his first section to the Irish ague, and his second to the looseness, which, he says, "doth greatly reign in Ireland as well among those of the country as among strangers, wherefore the English inhabitants have given it the name of the country disease. Many are a great while troubled with it, and yet get no other harm; and those that betimes do make use of good medicines are without any great difficulty cured of it. But they that let the



looseness take its course, do commonly, after some days, get the bleeding with it, whereby the disease doth not only grow much more troublesome and painful, but a great deal harder to be cured; and at last it useth to turn to the bloody flux, the which, in some persons, having lasted a great while, leaveth them of itself; but in far the greatest number is very dangerous, and killeth the most part of the sick, unless they be carefully assisted with good remedies."

The havoc made by this disease in the 17th century vindicates the propriety of the term used by Sydenham, namely the "Endemic dysentery of Ireland," and entitles the flux at least to the second rank among the *leaguer* sicknesses of that unhappy time. We find by the following note in the life of Anthony a Wood, that dysentery existed at Drogheda after the storming of the town by Cromwell: "Whereupon Thomas Wood, brother of Anthony, going into Ireland, he became an officer into the regiment of Colonel Henry Ingoldsby, against those that were then called rebels; where, at Tredagh, he ended his days of the country disease called the flux, Anno 1651." At the siege of Londonderry, *intra muros et extra*, both in the garrison and in James's army, the looseness, as we learn from Mr. Walker's account of the siege, caused great havoc; and at Limerick, which, as Trim says "lies in the middle of a devilish wet swampy country," many of King William's army fell a sacrifice to the dysentery."

It appears from the writings of Rogers and O'Connell that dysentery was common in Ireland in the earlier part of the 18th century, more especially in the years 1708, 1718, 19 and 1740, in which years, especially 1740, a fever prevailed which resembled in its causes, nature and universality, the epidemic fever of 1818.

In examining the annals of the Army Medical Board in Ireland, I find that the troops were much more liable to dysentery about two or three and twenty years ago than they are now, the change in this respect being probably owing to a great improvement in the Barrack and Hospital systems which has taken place since that time, and to the improvements which have taken place in the soldiers' dress. It appears from the valuable records of the Medical Board, that English and Scots regiments were generally more or less affected with dysentery, in many of the principal military stations, upon their first coming to Ireland, which well agrees with my recollection of the health of these troops at that period. The following, among many other notices of the same nature in the Medical Reports of the army, will show the prevalence of dysentery about the period of time alluded to.

The dysentery prevailed in the encampment at the Naul, which is about twelve or fourteen miles north of Dublin, during the autumn of 1796. It committed considerable ravages among the regiments of the Irish Brigade quartered at Cork pre-

vious to their sailing from Cove in October 1797. It broke out among the soldiers of the Herefordshire regiment of militia at Carrick-on-Suir in 1798, in the Guards at Limerick in 1799, and about the same period in many other corps, which it would be unnecessary to specify, quartered in different parts of Ireland. The places wherein it prevailed most among the troops were Cork, Limerick, Waterford, Carrick-on-Suir, Fermoy, Athlone, Clonakilty, Belfast, Enniskillen. In the account published by Dr. Barker and myself of the Epidemic fever of 1817, 18, and 19, the reader will find at p. 15, vol. I. a proof that the dysentery prevailed to a great extent in Waterford at the beginning of 1800; and with regard to the frequency of dysentery in 1801, the following statement in the report of the Army Medical Board in November is conclusive: "About the middle and towards the end of September 1801, a dysenteric complaint made its appearance among the troops, and the latest accounts afford satisfactory evidence that, from the above period to the present day, the progress of the disease has been uniform and extensive throughout every part of the kingdom; in many cases the symptoms have assumed an unusual degree of malignancy, and in a few the termination has been fatal. The disease has been attributed to the long continuance of dry hot weather, followed by a change of temperature, and a considerable fall of rain." From the foregoing extract it would appear that dysentery arising at this period towards the end of the epidemic fever which occurred in 1800 and 1801, and becoming general,

bore the same relation to that epidemic, that the dysentery which prevailed in the autumn of 1818 did to the epidemic fever of 1817, 18.

The principal object of this paper is to describe dysentery as it was witnessed in the Hospitals of the House of Industry, in Dublin, in the autumn and winter of 1818. It will not however be uninteresting to establish that the disease was not confined to Dublin, but existed in the same form about the same time in Kilkenny, Clonmell, Limerick, Waterford and Cork, and perhaps it existed in other places, from which I have not been able to obtain satisfactory accounts.

By a letter from Mr. Pack, surgeon to the Fever Hospital in Kilkenny, it appears that dysentery was more prevalent in that city in the latter end of 1818 and beginning of 1819, than during any period within his recollection ; and he states that the number of patients convalescent from fever who were attacked with dysentery, was often such as to oblige the medical officers to appropriate an entire ward of the Fever Hospital for the reception of the dysenterics.

Mr. Dillon, surgeon to the Clonmell dispensary, reports that dysentery was very prevalent in Clonmell in the autumn of 1818 ; that it frequently appeared as one of the sequelæ of fever ; that it also prevailed to an alarming extent in those who had not been affected with fever ; that it seemed to him contagious, and that at one period the mortality from

dysentery was as one to ten. I learn from staff-surgeon Eagle that a few cases of dysentery occurred in the 16th lancers and 97th regiment at Clonmell, in August and September 1818, but of late years, as this gentleman observes, dysentery has not prevailed among the troops in Clonmell or Kilkenny to any extent worth remarking.

In the following interesting communication from Dr. Geary, a correspondence is shown in the season at which dysentery appeared in Limerick, in the severity of the disease, and in its connection with fever, but a difference is observable in the year. Dr. Geary says that dysentery first appeared as an accompaniment to the epidemic fever in September, 1817 ; in November it was most fatal. At that period numbers both in town and country, as well as in the Fever Hospital, were affected with the disease. In January 1818, the use of the General Military Hospital was obtained from Government, to which, when the males were removed, almost every individual was seized with the complaint, which seemed attributable to the dampness of the house. The mortality during the first three weeks was 38. This, however, was checked by keeping up good fires in every ward. The dysentery was more observable among the poor as an attendant on the Epidemic fever than in the higher orders of society. It frequently arose during convalescence from fever, and in such it was most severe ; in these it was in general connected with rigors, with sudden and fixed pain in the bowels, which mostly yielded to bleeding

and purgatives. The disease began to cease in the the month of March 1819.

After the particulars, which have been given by Dr. Bracken, of the state of disease in Waterford, in a work already alluded to,\* it would be unnecessary to dwell on the prevalence and great mortality of dysentery in that city; I shall merely state that I have now lying before me a report from Dr. Poole of Waterford to Dr. Renny, which, while it confirms Dr. Bracken's statements respecting the extent of dysentery in Waterford, corroborates the remark already made, namely, that the inhabitants suffered in a much greater proportion than the military, and with the former that the disease was much more severe. Dr. Poole is of opinion that dysentery was contagious. The disease began to make its appearance in the city of Waterford in the month of July, 1818; it prevailed to an alarming extent in September, and continued till the winter, when the cold weather was thought to have put an end to its ravages.

At Cork also this disease was less frequent among the troops than among the commonalty, but that some increase took place even among the regiments in garrison during the late epidemic, and more especially in the latter end of the year 1818, will appear from the following return :

\* 1st volume of "the Account of the Fever lately epidemical in Ireland, by Drs. Barker and Cheyne."

PATIENTS ADMITTED WITH DYSENTERY INTO THE GENERAL HOSPITAL, CORK.

From February to May 1817	-	4
May to August	-	0
August to November	-	2
November to Feb. 1818	-	10
		—
Total	-	16
		—
February to May	-	2
May to August	-	3
August to November	-	13
November to Feb. 1819	-	9
		—
Total	-	27
		—
February to May	-	0
May to August	-	0
August to November	-	1
November to Feb. 1820	-	0
		—
Total	-	1
		—

Of these one patient died in 1817, one in the quarter ending November 1818, and one in the quarter ending February 1819. Dr. Pitcairn, the Deputy Inspector of Military Hospitals at Cork, who furnished the foregoing return, affirms that the cases were more numerous in the regimental hospitals, in which he conjectures that the mortality was about one in twenty, than in the general hospital. To Dr. Pitcairn I am also indebted for valuable information on the subject, which he obtained from



two Physicians of eminence in Cork, namely, Dr. Hallaran and Dr. M. Barry.

From the first we learn that dysentery has not ceased to be prevalent in Cork, at particular seasons, during the last thirty years, but that it has prevailed most especially in years of scarcity, and when the common articles of food have proved of bad quality ; it has prevailed with most severity in the autumnal season, and during the continuance of wet weather. Dysentery frequently occurs as an endemic in Cork, accompanied with a fever peculiar to itself, which invariably has subsided on relief being afforded to the dysenteric symptoms. Ague but seldom occurs in the city, though it is very common in situations distant not more than one, two, or three miles from it. Dysentery at certain seasons is to be met with in all parts of Cork, but most remarkably in the low parts of the city, and near the slaughter houses, and where there are deposits of filth, with want of due ventilation. It has been obviously contagious on many occasions. The mortality in general is most remarkable among the aged and infirm. The dysentery, which prevailed in Cork in the years 1818 and 1819, seemed intimately connected with the causes which contributed to the epidemic fever of those years, was found to be simultaneous with that fever, and frequently succeeded to it.

The dysentery, according to Dr. M. Barry, has always from time to time been prevalent in Cork, but it is chiefly confined to the poorer inhabitants ; those

in good circumstances are generally exempt from it, though the disease now and then attacks an individual amongst the latter. In the early part of his residence in Cork, Dr. Barry had frequent occasion to observe dysentery amongst the inhabitants of a low confined district of the dispensary, which was then, as at present, extremely filthy and ill ventilated. Continued fever often existed at the same time, and in the same quarter of the town, as dysentery; but he has often seen dysentery prevail without continued fever, and vice versa.

The dysentery of Cork, which differs in many respects from that of authors, and also from the specimens which he has seen of the disease in England and Scotland, depends entirely on local circumstances. He does not consider the dysentery of Cork contagious. He has had occasion to treat single patients, from whom he never saw it spread: in the practice of the dispensary different persons in a family have been ill at the same time, but they were exposed to the same remote cause. He mentions a fact, which he considers decisive of the non-contagion of dysentery: in the years 1797, 1798, and 1799, the dysentery prevailed in the Caithness legion of fencibles to some extent. The Surgeon, anxious to determine the question as to its infectious nature, caused the same glyster pipe to be used, without cleansing, for those labouring under dysentery, and those who were free from that disease; the latter notwithstanding were not infected, from which he concluded that the dysentery of Cork is not infectious.

Dr. M. Barry affirms that the troops were frequently liable to dysentery, while they occupied the old barracks ; but he has heard that it has been of rare occurrence in the new barracks. Several years ago, when the disease raged violently in the old barracks, (now the dépôt for convicts) the care of the sick was, in the absence of the Regimental Surgeon, entrusted to the late Mr. Bell, Surgeon, in Cork. At the period in question the troops were supplied with water from the river Lee, which, in passing through the city, is rendered unfit for drinking by the influx of the contents of the sewers from the houses, and likewise is brackish from the tide, which ascends into their channels. Mr. Bell, suspecting that the water might have caused the dysentery, upon assuming the care of the sick, had a number of water carts engaged to bring water for the troops from a spring called the Lady's well, at the same time that they were no longer permitted to drink the water from the river. From this simple, but judicious arrangement, the dysentery very shortly disappeared among the troops.

The poor inhabitants of Cork had no other water than that from the river Lee, until very lately that a few public fountains were established for their use, and it is certain that dysentery is not now nearly so common as formerly. At the time referred to Dr. M. Barry never witnessed so fatal a disease as the dysentery of Cork. He believes that at least one out of three persons affected with it, perished. He

is not prepared to say what is the rate of mortality at present.

From these communications from Cork I should be disposed to conclude that the inhabitants of that city are liable to dysentery in each of its principal varieties, both as connected with continued fever, and as an endemic disease connected with intermittent fever ; the former variety contagious, the latter not at all so.†

Intermittent fever, a disease which is rare in Dublin, was seldom witnessed during the time that dysentery prevailed with us, namely, from September 1818 to February 1819 : I did not observe more than two or three cases of intermittent fever in hospital during that period. I am informed by Mr. Lloyd, Surgeon to the Dispensary at Malahide, that scarcely a case of intermittent occurred in a very aguish tract, which lies between Balldoyle and Swords, between five and seven miles from Dublin, while continued fever was epidemical in that district ; and I understand a similar remark has been made in other parts of the country, where ague is often endemical ; it almost disappeared in Kilkenny during the same time,\* and was much less prevalent than usual in Cork and Limerick. It is pretty clear, therefore, that the cause of the dysentery of 1818 differs from that which also produces intermittent fever ; the disease of 1818 rather belonged to that great

† The reader is here referred to Dr. Harty's valuable work on Dysentery.

\* Mr. Pack.

variety of dysentery, which originates in causes that are also productive of continued fever.

In the beginning of September 1818, when I understood that there were many cases of dysentery in the Hardwicke Fever Hospital and the Richmond General Penitentiary, I made a report to that effect to the late Governors of the House of Industry, and at the same time I suggested the expediency of removing all patients who laboured under dysentery from the fever wards to wards better suited to their accommodation, observing that although equal attention to cleanliness and ventilation was required in dysentery and in fever, yet that the fever wards were too cold for patients affected with bowel complaints; that the fever patients were disturbed, and the atmosphere of the fever wards was vitiated by the frequency of the calls to go to stool, and the effluvia of the evacuations which are peculiar to dysentery; that according to many professional men dysentery is an infectious disease, and might be communicated to the convalescents and servants of the Fever Hospital, and thus add to the difficulties of providing for the admission of the destitute sick, which were already great; and finally, that the patients in dysentery had become so numerous as to prevent the advantageous working of the Fever Hospital.

In consequence of this representation, orders were given by the Governors of the House of Industry, whom I always found most attentive to every sug-

gestion which promised to improve the condition of the sick, to prepare wards in the Whitworth Hospital for the reception of patients labouring under dysentery, who had contracted that disease during fever or during convalescence from fever, or who were afflicted with dysentery when they were admitted into the fever hospital; and at my request these wards were given to me as a part of my hospital charge.

Little benefit can be expected from mere prescription unless an Hospital be suited to the diseases which it contains, unless proper regard be paid to comfort in the supply of the patient's food, to the cleanliness of his person, to the spaciousness of the ward, to the purity of the air which he breathes, and to his feelings; when these things are neglected the consequence is not merely that recovery is retarded, but that new complications of disease arise. In the present instance the sashes of the windows were closed, while at the same time the ventilation of the wards was secured by additional apertures which were made into the chimneys near the ceiling: a cotton bed-gown and a pair of thick worsted stockings were obtained for every individual; instructions were given relative to the effectual swathing of the patient with compresses and flannel rollers; slipper-baths and bed-pans for the wards were provided; the nurses were enjoined to pay scrupulous attention to cleanliness, and the dietary of the Hospital was changed, the following being substituted for the usual diet table of the establishment:

*Dietary of Patients labouring under Dysentery  
in the Whitworth Chronic Hospital, during the  
Year 1818-19.*

Diet.	BREAKFAST.	DINNER.	SUPPER.
Full.	White bread $\frac{1}{2}$ lb. New Milk 1 pint. or, Rice, 4 oz. New Milk, 1 pint. Cinnamon & Sugar.	Mutton, $\frac{1}{2}$ lb. raw, made into soup. White bread $\frac{1}{2}$ lb.	White bread, 4 oz. New Milk, 1 pint, or, Flour, $\frac{1}{2}$ pint, New Milk, 1 pint Cinnamon, &c.
Middle.	As above.	White Bread, $\frac{1}{2}$ lb. New Milk, 1 pint. Spice and Sugar,	Flour, $\frac{1}{2}$ pint. New Milk, 1 pint. Spice, Sugar, &c.
Low.	Flour, $\frac{1}{2}$ pint. New Milk, 1 pint. Spice and Sugar.	Rice, 2 oz. New Milk, 1 pint. Spice & Sugar.	Flummery, 1 pint. New Milk, 1 pint.

Sago, Indian Arrow Root, Tapioca, Eggs, Tea, Chickens, &c.  
were occasionally given.

Rice Water, Barley Water, New Milk, *ad libitum*.

J. TAYLOR.

I felt unwilling to allow so favourable an opportunity of informing myself on the nature and treatment of dysentery to escape. Generally speaking, endemic or epidemic dysentery is witnessed only by the army or navy medical officer at times of general agitation and anxiety, among troops exposed in camp, cantonment, or on shipboard, to the exhalations of an unwholesome soil, or in garrisons besieged, or ar-



mies harassed by fatigue, depressed in spirits, or stinted in food, retreating before a victorious enemy. I believe it has rarely fallen to the lot of a physician in civil life, possessing all the advantages of books, and of consultation with skillful and experienced colleagues, to witness dysentery upon such a scale as I did in the autumn and winter of 1818.

The tendency to dysentery was manifest from the beginning of autumn 1818 to the beginning of spring 1819. Dysentery was at its height in the month of October, and became less frequent in January. In early autumn several cases of cholera degenerated into dysentery, and in the spring following symptoms of dysentery accompanied the measles, then epidemical in many parts of Ireland. The occurrence of dysentery in the present instance is an additional proof of the truth of the observation which has been often made, namely, that in the latter end of very hot seasons the bloody flux is apt to become general.

The patients admitted into the Whitworth Hospital were frequently of worn-out constitutions, and it appeared to us, that when any other organic disease coexisted it was much more difficult to subdue the symptoms of dysentery.

Very often dysentery arose during convalescence from fever, in which case I several times ascertained that the preceding fever was not attended with any unusual gastric or enteric irritation. Sometimes the disease commenced at the termination of fever, and

then it was at first so slight as to appear like a salutary crisis, its only symptoms being mucous stools with a degree of uneasiness at the termination of the rectum. Frequently the disease arose in the course of fever. Nausea, mucous or bilious vomiting, tenderness of the epigastrium and deep yellow suffusion of the skin characterized many fevers which occurred in the autumn of 1818; and when symptoms of dysentery took place before those of fever ceased, first, there were borborygmi and tormina, then mucous and bloody stools and tenesmus, the character of fever being gradually lost as that of inflammation of the mucous membrane of the great intestines was established; but from the peculiar nature of the fever of the season it was sometimes difficult to mark the precise time when the new disease commenced. The bilious fever of the autumn continued till near the termination of winter, consequently it existed as long as the dysentery was prevalent in the Hospitals of the House of Industry. When the symptoms of bilious or gastric fever were exchanged for those of dysentery, probably an extension took place of the irritation from the mucous membrane of the stomach and small intestines to that of the large intestines; hence borborygmi and tormina, as they occur in affections of both portions of the intestines, were not sufficient to mark the change in the disease till they were attended by mucous bloody stools, then, indeed the case no longer admitted of doubt. The case of Tully, p. 31, well illustrates this view of the disease.

When dysentery was unconnected with continued fever, which apparently often was the case, there was nothing peculiar in its origin ; the patients generally assigned cold, damp, fatigue, hardships, indigestible food, as the causes of their disease, which began with confinement of the bowels, chills, pyrexia, tormina, unsatisfactory stools, and tenesmus.

I have analysed 98 cases of dysentery, which were carefully noted, and I find that 33 of these arose during recovery from fever, 15 while the fever was in progress, 15 arose from cold, or cold and wet, 4 from indigestion ; the rest were doubtful, but it is observable, that of these many had been exposed to febrile contagion, and that nine of the number had been in close communication with patients labouring under dysentery, four having been nurses or deputy nurses in wards in which that disease had occurred, four had slept with patients in dysentery, of whom one had used the same night chair ; the ninth was one of our clinical clerks, Dr. Prevost of Geneva, who conceived that he had contracted the disease in the dissecting room, where, in the ardour of his zeal for medical science, he spent much of his time hanging over the bodies of those who had been victims of dysentery in the Whitworth Hospital.

During the prevalence of dysentery, fevers extending to the end of the second and third week were much less common than fevers of five, seven,

and nine days, on recovery from which last the patient suffered one, two, or more relapses, in so much that patients labouring under a fourth attack of fever were often to be seen in our hospitals. It was observable that dysentery frequently occurred at that period of recovery from fever when there seemed the greatest liability amongst the convalescents to relapse. Dysentery, whether its connection with fever could be traced or not, often commenced with a rigor, and terminated in free perspiration ; it was sometimes converted into a fever, while on the other hand, fever was frequently converted into dysentery ; and lastly, during convalescence from dysentery, several persons sustained an attack of fever ; in short, these forms of disease were convertible the one into the other ; so that the opinion of Sydenham, that dysentery is a *febris intro-versa*, that it is fever turned in upon the intestines, received support from our observations ; and it is not unreasonable to suppose, that as these patients in my wards, in common with most of the poor of the city, had been exposed to the contagion of fever, this contagion, according to the condition of the system at the time of its application, or some other modifying circumstance, may have produced at one time fever, at another dysentery. The nurses, who escaped dysentery, were for the most part seasoned to fever, and at least two of those who suffered under the former disease had not been affected with fever during the epidemic.

In almost every patient, of whose case we obtained a distinct account, whether the disease arose

from fever, or was unconnected with it, a remarkably foul taste was complained of, such as often exists when there is a deficiency of bile in the intestines ; considerable flatulence also existed, then rigor took place, which was the commencement of pyrexia : there was a case or two, in which the rigor took place after symptoms of dysentery were established. In a few cases nausea occurred as one of the earliest symptoms ; in a few, tenderness of the belly ; in several, a severe lancinating pain in some of the abdominal regions, generally in the umbilical, or even lower ; but in the common course of things the rigor was followed by gripings, a frequent inclination to go to stool, with a desire to continue the effort, by which the bowels are emptied, and to these symptoms there was soon added a feeling as if the effort had been unproductive or incomplete,—as if there was still something remaining in the bowels ; the skin was dry and hot, sometimes pungently so, the stools from the first were loose, perhaps not immediately undergoing any other change in their appearance, but in general they were mucous, and in rather more than one half of the cases there was a discharge of blood on the very first day of the disease.

With respect to the discharges from the bowels, the only remark I have to make worthy of attention is that, notwithstanding very diligent inquiry, we could not discover that scybala were passed by any one of the patients. A regard to cleanliness prevented the stools being preserved for daily inspection, but they were frequently inspected, and

their appearance was regularly reported by the patients themselves, and by the nurses, some of whom were observant and faithful. All the other varieties of excrementitious matter, which belong to dysentery, were repeatedly witnessed : feculent matter of a natural colour, of a drab colour, or of the colour and consistence of flummery ; feculent matter, mixed with mucus, with clear blood ; blood without any addition ; mucus alone, mucus tinged with blood, mixed with blood, with purulent matter ; purulent matter alone, or mixed ; a bright green discharge, like conferva, a deep green discharge, produced by calomel and opium ; we also observed a loose, but not otherwise morbid discharge, alternating with bloody, mucous, or purulent stools, when the disease was very near a fatal close, and in some few instances we detected what seemed either shreds of membrane which had sloughed, or portions of coagulable lymph, but no scybala were found. It seems probable, had there been scybala, that they would have been detected in the bowels during dissection, which was not the case in a single instance. Mr. Pack, of Kilkenny, in an answer to some inquiries on the subject of dysentery, which were proposed to him at my request, observes that dysentery, as it appears in that city, is dissimilar from the disease he has witnessed in the Mediterranean and in camps ; in no instance having been able to detect scybala either in the discharges, although the attention of the nurses was particularly directed to this point, or by dissection ; he has generally found the stools to consist of pure blood, or blood and mu-

cus mixed, and after death he has at times found the colon contracted, at others distended, and generally ulcerated, but nothing like fæces or scybala contained in it.

In many respects the dysentery of 1818 resembled that which has been described as occurring in tropical climates.\* As in the latter variety, so in the former, the functions of the liver and skin were disordered from the commencement of the distemper, and continued thus until its termination. The skin was remarkably unyielding, and, if we may judge by the appearance of the stools, the biliary secretion was often suspended for many days.

In point of severity the cases differed from each other as much as can be conceived ; sometimes the complaint appeared in the form of mucous diarrhœa, without much pain or fever ; sometimes it was attended with all the symptoms of an acute enteric inflammation. We remarked that the most severe cases in the first stage, and the most unmanageable throughout, arose in the course of fever : the mildest cases were those which seemed to have least connection with that disease.

The symptoms, on which chiefly we formed our prognostic in the early part of the disease, were the tenderness of the abdomen, the degree of pain, the frequency of the stools, the extent of pyrexia, and

\* Johnson, p. 354.

more especially the quickness of the pulse: the pulse was often hard, full, or strong; but these qualities were of less importance than its quickness. It was difficult to ascertain whether ulceration of the mucous membrane of the intestine had taken place or not, and still more whether the ulcerations were large, numerous and deep: from the appearance of the stools, in the advanced stages of the disease, these things might sometimes be known, but not so in the early stage. When the disease continued without relief for twelve or fourteen days, a degree of emaciation usually became observable, much more rapid in some than in others, and which was always an alarming symptom; when, added to emaciation, a patient in the second or third week of dysentery acquired a haggard look, when he had a quick pulse, and an abdomen impatient of pressure, we had little hope of his recovery.

A harsh, dry, opaque, dirty looking skin, a florid, clean, varnished tongue, vigilance, a hollow eye, and pallid, wasted, faded cheek, a desire to go to stool immediately after drinking, pains in the knees, and cramps in the legs, fits of dyspnoea, a tendency to oedema and ascites, belong to a more advanced stage, but not to the last, which was characterised by extreme emaciation, supine posture, involuntary stools, a thin reddish secretion flowing without check, sordes on the teeth, hiccup, tendency to delirium, difficulty of swallowing, and a pulse like a thread.

At one period, when this disorder was most fatal,



our expectations of recovery were confined to those cases which had not existed long, and in which the patient was not emaciated at the time referred to. A majority of the patients died, who had been ill more than six or seven days, and of those who were emaciated, scarcely one recovered. In some cases the disease hurried on to a fatal termination, with a speed which nothing could retard; but such cases fortunately were rare. Sometimes a case, at first marked with no symptom of unusual danger, suddenly changed its character to that of uncontrollable severity. Thus, a man of the name of Maher, who had been affected with dysentery for five or six days, in a severe, but not alarming form, sustained on the 24th of August a very remarkable aggravation of distress; he had frequent paroxysms of excruciating pain, with continued desire to discharge his bowels, and the greatest tenderness of the belly, symptoms which resisted blood-letting, large opiates, and every expedient of art, and terminated in death on the 25th, after he had been in agony which can scarcely be described: on the day on which he died his whole body was bathed in sweat, and every muscle was convulsed from pain. Although this is not the place to dwell on the morbid appearances, I may be permitted to observe, that the dissection afforded an explanation of the agonies which this patient endured, for the largest portion of the great intestine, not deprived of its mucous coat, was not more than an inch square; in many parts the remaining surface was black, rough, and eroded; in numerous others the muscular coat was as clean as if

it had been prepared for anatomical demonstration. In the preceding case the work of destruction was unusually rapid: scarcely one-fourth of the fatal cases terminated within the first fortnight; a fourth more of the patients died within the month, the rest lingered for two or three months.

Dysentery was productive of several forms of dropsy,—ascites, and anasarca in particular; and it is worthy of remark, that a swelling occurred in several of the patients, both males and females, resembling the phlegmasia dolens in all respects but in its connection with parturition. In one or two cases symptoms of hydrothorax were observed.

Respiration sometimes became suddenly oppressed in the advanced stages of dysentery, and was attended with some pain in the chest, and a short teasing cough with scanty mucous expectoration; the patient could not remain one minute at rest, from universal uneasiness; the pulse was small, the countenance altered, generally livid, or with a circumscribed flush; when asleep, the patient fell into colliquative sweats; these symptoms were generally followed by sudden prostration, cold extremities, and, at no great distance of time, by death. This affection seemed to depend upon a translation of disease to the lungs, a degree of effusion having been demonstrated in the cavity of the pleura, with accumulation of blood in the substance of the lungs, in every dissection which was made; in one of these we found a very considerable exudation of puriform mucus in the cavity of the

bronchia. In one or two instances, in which the patient was affected in this manner, before his strength was exhausted, venesection, and a blister to the sternum, removed the attack of dyspnœa.

Death sometimes occurred unexpectedly, from the escape of the contents of the intestines into the cavity of the peritoneum, in consequence of a portion of that coat being destroyed by ulceration.

The continued irritation, and straining at stool, led to very unpleasant consequences, frequently to dysuria and procidentia ani, and when there was a tendency to hæmorrhoids, the sufferings of the patient were much aggravated by the tumours enlarging, protruding, and becoming painful. In one instance dysentery led to consequences even more deplorable, as will appear from a perusal of the case of Elizabeth Curran. After exposure to cold, in the month of September, this patient was attacked with rigors; she was affected with creeping of the skin, which was followed by pain in the belly, tormina, bloody stools, and tenesmus; in three weeks the discharge of blood stopt, but the other symptoms continued till the 22d of November, the period of her admission into the Whitworth Hospital, at which time she laboured under severe twisting pain in the belly, followed by frequent inclination to go to stool: the stools were small, mucous, and followed by tenesmus; there was a swelling of the abdomen, particularly in the umbilical region, soft, but impatient of pressure; her pulse was quick, her tongue furred;

the pain was always brought on by eating or drinking : these symptoms, which were aggravated by the rumbling of her bowels, by occasional eructations, and by dysentery, baffled every means employed. On the 7th December, her complaint having resisted repeated bleedings, a variety of purgatives, baths, calomel, and opium, the outline of the abdomen resembling that of a woman in advanced pregnancy, and no discharge having been for some days obtained from the bowels but a little mucus, an aloetic glyster was ordered, which could not be administered, owing to some resistance encountered by the tube of the syringe in the rectum ; this led to an examination of the rectum, and the discovery of a stricture about four inches from the anus ; a flexible catheter was introduced, and carried beyond the obstruction ; and in this way an injection was administered without relief. On the 10th many quarts of tepid water were thrown up, and returned, mixed with a considerable quantity of excrementitious matter, and with some subsidence of the swelling ; bougies, and every means were tried to relieve her, but nothing but opium seemed to lessen her sufferings, till her illness terminated in death on the 13th of the month. On dissection, the intestines were found greatly distended, the small intestines being seven, and the great intestines nine inches in circumference ; at four inches from the anus there was an extensive hard stricture, through which the finger could not be passed ; the coats of the intestines were nearly an inch in thickness, which was chiefly owing to a dense, white, fibrous matter, interposed

between the peritoneal and muscular coat; the mucous membrane, both at and above the stricture, was in a state of ulceration.

The dissections, which were made in the Whitworth hospital in the autumn of 1818, and the ensuing winter, of the bodies of such patients as died of dysentery, presented the diseased appearances chiefly in their commencement, or after the morbid action had run its course. Death scarcely took place while the disease was in its intermediate stages. If dissections of all the intermediate stages of the disease had been made, we might have been able to point out with more precision the symptoms which belong to the commencement of the ulcerative process, by which means our prognostics would have been more accurate. The ascertaining of this point, which certainly is one of great importance, must be accomplished by the labour of our successors in pathological science.

The mucous membrane of the stomach, and small intestines, sometimes presented an inflamed appearance, which in general became more remarkable as we approached to the great intestines; then ulceration began to show itself, at first superficial, afterwards laying bare the muscular fibres of the intestines; the ulcerations became larger, more numerous, and deep as the rectum was approached; but it was remarked that the last three or four inches of the rectum were sometimes pretty sound. The pe-

ritoneum was found less diseased than might have been expected.

The deaths which took place when dysentery was in its first stage, were owing to fever, or to some other fatal disease which concurred. When owing to fever, a peculiar state of the mucous membrane of the stomach and intestines was noted. This membrane was found of a more or less deep red or purple colour ; it was rather thickened, soft and pulpy ; the least violence destroyed the continuity of the surface, which had lost its healthy smoothness, was uneven, and not unfrequently rough and granulated, the blood vessels being enlarged and loaded with blood : where the alteration in texture was inconsiderable, there were numerous spots of a deep red colour, which at first resembled extravasations, but, on close examination, seemed to be blood vessels, ramifying in an arborescent form, and connected with veins. The stomach contained a viscid mucus, firmly adhering to its coats, and mixed with an opake yellow, or whitish matter ; the contents of the large intestines were fluid, and of a yellowish green colour.

In a patient whose death was caused by disease of the lungs, which were found in a state of extreme sanguineous congestion, the bronchiæ being also stuffed with glairy mucus, the mucous membrane of the great intestines was extremely thick and vascular, of a florid red colour, pulpy and shining ; the remaining coats were thickened and rather rigid, and the vessels of the peritoneum, large and turgid, so

that, from looking at the outside through the intestine, we expected to find the internal surface in a diseased state. The person alluded to was named Mahon, and was admitted into the Fever Hospital on the 6th of September, 1818. The symptoms on her admission were pyrexia, tenderness of the epigastrium, headach and general pains : the headach was relieved by local bleeding, but the tenderness of the epigastrium and general pains continued, and were accompanied with oppression of the breathing, cough and copious expectoration : the symptoms of pulmonic disease increasing, reduced the patient to such a state of extreme exhaustion that she sunk on the 12th day after her admission. Four days before her death, dysentery was superadded to her already complicated sufferings ; she had a lancinating pain in the abdomen, tormina and discharge of blood by stool ; symptoms, which were relieved by castor oil, followed by compound powder of ipecacuanha. The most interesting part of the dissection was the display of a highly vascular state of the whole of the mucous membrane of the intestines, without ulceration or erosion ; proving, that a free discharge of blood may from this, as from other mucous surfaces, take place without previous ulceration or erosion.

Another case deserving of record occurred, in which death took place before the inflammation could be said to have attained the length of ulceration, in which, however, there could be discovered a slight erosion of the epidermoid coat of the mucous mem-

brane. One of the deputy nurses of the Richmond General Penitentiary, Mary Tully, was seized on the 17th of September with rigor, nausea and bilious vomiting, which continued all night. On the 18th, there came on headach, a stitch in the left side, oppressing the breathing; tenderness of the abdomen, white fur on the tongue, foul taste, great frequency and strength of pulse and heat of skin. On the 19th, intolerable headach, anxiety, increasing frequency of the pulse, and pain in the region of the stomach, with tenderness of the epigastrium, frequent vomiting of mucus, with much straining. On the 20th, continued vomiting, smallness with frequency of the pulse, brown tongue, insufferably bad taste, the belly all the while free. On the 21st acute pain in the bowels, nine or ten stools, consisting of green glairy matter and pure blood; the abdomen now intolerant of the slightest pressure; countenance sunk and pallid; pulse feeble; strength prostrate. In the evening, return of vomiting. On the 22d, the pulse was scarcely perceptible; the feet cold; the countenance shrunk and ghastly; her principal complaint however being a severe burning sensation in the region of the stomach, which was intolerant of even the slightest pressure. In the evening she vomited a dark fluid, with a precipitate like coffee grounds; the stools were pitchy and extremely foetid, the teeth covered with sordes. On the evening of the 22d, being the 3d day of the bowel complaint she died, after a return of termina with redoubled violence: she referred her agony to the umbilical region. Every thing



which promised to relieve this patient was done by my friend Dr. Crawford, but the disease pursued its course.

On dissection, the mucous coat of the stomach and intestines was in very many places elevated by air, which was interposed between it and the subjacent coat, and there were numerous spots of a bright red colour, loaded with blood ; the membrane lying between these spots, even after a minute injection, did not appear to contain a single vessel, while the red patches above mentioned were injected to an extreme of minuteness, and had given way to the injection which was extravasated. These patches in many places confined air bubbles, but the latter in many others existed where there were no patches. The ileum was free from either patches or air in its coats. The internal surface of the rectum and sigmoid flexure of the colon was highly vascular ; here there were some black rough stripes, and a few small erosions.

As dissections elucidating the early stages of dysentery are rare, I shall delay the reader a little longer, while I relate another case, which was attended with appearances in some respects similar, but with the addition of an effusion of coagulable lymph on the mucous membrane of the small intestines, which extended over nearly the whole of the jejunum ; an appearance very uncommon. The lymph was of a bright yellow colour : it adhered to the surface of the mucous membrane, but could easily

be detached in a flaky form, exposing the surface beneath in a highly vascular state. The free surface of the coagulated lymph was granulated and uneven, remarkably so where it covered the valvulae conniventes. The large intestines were more vascular than natural, with numerous minute circular depressions, extremely vascular, over the whole of their mucous membrane. The mucous membrane of the folds of the colon were of a grey colour, and rough, superficial erosions of an irregular shape intervening between them. The patient, Eliza Morris, æt. 34, was admitted into the Hardwicke Hospital on the 21st of August, after an illness of eight days duration, which commenced with a rigor, headach, pain in the bowels and looseness; the symptoms on admission were a quick weak pulse, furred tongue, anxiety, general pains, headach, tormina and frequent stools. On the 22d, added to these, were tenderness of the epigastrium, a tongue with a thick fur, and a very bitter taste. On the 23d and 24th, incessant vomiting, tormina, tenesmus, frequent bloody stools; great tenderness of the abdomen, thirst, and prostration of strength. On the 25th repeated efforts at stool, with scarcely any evacuation; much tenesmus; black tongue; on the 26th death, after excruciating pain.

It is to be observed, that in the preparations which the dissections just alluded to supplied, there is no perceptible thickness of the coats of the intestines; the thickening of the intestines belonged to the

more protracted cases of the disease, and generally bore a proportion to its continuance.

We may divide the preparations in the Whitworth Hospital, made at my request, into two classes, those in which the coats of the intestines are not thickened, and those in which they are. Of the first class, there are specimens of the following appearances: The mucous membrane increased in vascularity, without abrasion or ulceration. (Mahon). The mucous membrane covered with coagulable lymph (Morris). The mucous membrane simply abraded, its epidermoid coat removed (Tully). The mucous membrane ulcerated; the portions of membrane intervening being of a natural appearance (Flood, Parker, Nolan). Lastly, the mucous membrane partly ulcerated, partly covered with coagulable lymph (Martin Dunne).

In the second class are the following genera: The mucous membrane simply abraded. (Flood, Kelly, Mary Ryan.) The mucous membrane ulcerated; the portions between the ulcers being of a natural appearance (Cox, Taafe.) The mucous membrane rugous and ulcerated (Hagan, Reilly.) The mucous membrane ulcerated and filamentous, hanging in shreds as if sphacelated (Dunne, Melia, Baillie.) The mucous membrane partly ulcerated, partly removed, exposing the muscular coat. (Campbell, Connery, Cullen, Moran, Conolly.) In many of these preparations, the mucous membrane, when

not eroded or ulcerated, is covered with an exudation of coagulable lymph.

In a good many dissections there were numerous holes large enough to admit the head of a pin, more especially in the rectum and lower part of the colon, regularly round, and for the most part vascular in the centre, with elevated edges; these apertures were at first supposed to be small ulcers, but dissections, made after dysentery had attained an advanced stage, left little room for doubting that they were the ducts of the mucous glands enlarged, and, in the advanced stages, either ulcerated or connected with a cyst formed of the lining membrane of the duct, which secreted a gelatinous matter, whereof these cavities were often full.

I have dwelt perhaps longer than necessary on the morbid appearances, which I have been induced to do from my opportunities of obtaining accurate information on this head having been peculiarly favourable; and now having described the morbid appearances without referring to any author on the subject, I find that it was my duty to be particular, as it appears that some of the sources of information are not of the purest kind on which physicians have relied. Thus, for instance, it was customary to refer to Sir John Pringle's account of the dysentery, trusting to the general accuracy of that eminent physician; whereas we learn from Dr. J. Hunter, that Sir John acquainted him, that he put but little confidence in any of the dissections of dysenteric

patients which were made in the military hospitals, as the bowels were not inspected minutely.

The liver was, in a majority of the dissections, apparently sound, but in a good many instances remarkably otherwise ; in two cases there were abscesses formed in its substance, and in a considerable number of bodies it was in a state of great sanguineous congestion.

In the wards which were under my care in 1818, the insufficiency of dogmatic instruction, unsupported by clinical experience, was evinced. I had often witnessed obstinate cases of dysentery, but I had not formed an adequate conception of the horrors of that disease, until I saw the patients who were congregated in the wards of the Whitworth Hospital : every successive visit more strikingly exemplified, in the hopelessness of the second stage of dysentery, the infinite consequence of treating its first stage with skill. The lower orders in this country, it is true, generally exhibit a very patient endurance of suffering, when they feel death approaching, yet to their physician, from whom they still hope for relief, their situation is only the more affecting, from the extraordinary calmness with which they prepare themselves for death, when it seems inevitable. One little trait of magnanimity the reader will perhaps allow me to mention. I have observed a patient, himself in a hopeless state, eloquent in detailing the sufferings of a comrade in an adjoining bed, while he has left the description of his own

distress, his watching and pain, and all the particulars of his complicated suffering, to the nurse or her assistant.

I undertook the charge of the patients labouring under dysentery with hopes, which I am sorry to say, I soon found were not to be realized. Under such circumstances the situation of the physician is indeed trying. From frequent disappointment in the use of the means which have received the sanction of authority, he is in danger of falling into a heartless routine, unless he is induced to rouse himself from apathy, by a recollection that it is his duty, at least to point out the causes of his failure, which he cannot do until he has ascertained their nature, and put every expedient which has been recommended by his predecessors to the proof.

It is worthy of observation, that while the dysentery was so frequent a disease in the hospitals of the House of Industry, it was comparatively rare in the other fever hospitals of Dublin; to account for which it may be mentioned, that patients actually labouring under dysentery were either excluded, or considered themselves excluded from the latter, while they were promptly received into the former. In the Fever Hospital in Cork-street, however, attacks of dysentery were by no means so numerous as at the House of Industry, and hence it is of importance to inquire in what these fever establishments differed. The patients at the House of Industry in 1818 had not hospital dresses as at Cork-street. The Rich-

mond General Penitentiary, in which a great majority of the fever patients were, not being intended for a Fever Hospital, was not so completely ventilated as it would otherwise have been ; but perhaps the greater prevalence of dysentery may have arisen from the number of sick in the House of Industry, which exceeded the sick in all the other Fever Hospitals. It cannot be denied, that the fever wards were, to appearance, equal to those of the permanent Fever Institutions of this city, which, in point of comfort and cleanliness, are worthy of imitation ; and that the patients were not crowded in any of the wards.

With regard to the Whitworth Hospital, its site is good, that of the House of Industry, within the bounds of which it stands, being one of the best in Dublin. It commands an extensive view of the city, and of the county of Dublin mountains ; it is well supplied with water ; its wards are remarkably clean and well ventilated ; for each bed ample space is allowed ; the sick are regularly supplied with wholesome food, and they have every comfort which an Hospital can afford ; and yet it must be admitted, that of the patients who died, some, probably, would have recovered in a private house, away from the moans of the dying and the atmosphere of disease ; to which last I attribute much of the disappointment which I experienced. Patients labouring under hectic fever, and such is the nature of the fever which accompanies the advanced stages of dysentery, appear to me to waste away faster in an

Hospital than in any other situation. Several of the patients, with most unfavourable symptoms, who at my request left the Whitworth Hospital, soon recovered in their own lodgings; but unfortunately there were not many who had lodgings to go to; the great majority were destitute beings, who, had they been dismissed from the Hospital, would probably have died in the streets of the city. I was therefore constrained to allow them to remain in the Whitworth Hospital, which, in every respect, was preferable to the Fever Wards whence they came. Had they been discharged from our Hospitals they would have propagated the disease in the crowded and miserable lodgings to which alone they could have had access. But in as far as a consideration of the case was limited to the recovery of the patients, could they only have been supplied with means of subsistence, and protected from the weather, I think their chance of recovery would have been greater in any situation than in an Hospital so occupied. It appeared to me that the progress of the disease was less rapid in two small wards, originally destined for patients who had seen better days, which were now occupied by patients in dysentery, than in the large wards, which contained ten or twelve patients each.

I have such confidence in change of air and scene in the course of acute as well as chronic diseases, that I trust it will not be presumptuous in me to express a hope, that in future no Fever Hospital will be erected without having a convalescent ward, remote from the fever wards, and as unlike them



as possible. I have often seen benefit from a change of air and scene, made in the early stage of dubious convalescence from febrile disease ; nay, sometimes even in the course of these diseases, inso-much that the question of such a change, even before acute diseases come to a close, is, I am persuaded, deserving of more consideration than has yet been bestowed upon it.

I have now shortly to explain the methods of treatment which were adopted, and which were very various, according to the stage and severity of the disease. It is a great error to suppose that a disease admits of only one method of treatment. I by no means affirm that the mode of treatment which I followed is the only method of successfully treating dysentery, but merely that it seemed better suited to the form of the disease which fell under my observation, than other methods which are more generally adopted, and this opinion is formed after a fair comparative trial. In the course of the season the practice of the Hospital underwent several changes, particularly in the advanced periods of the disease, and our confidence in certain methods of cure fluctuated, was weakened by experience, and then restored by experience still more extensive. For example, the treatment by means of mercury did not succeed so generally as I expected. Calomel and ipecacuan ; the blue pill and ipecacuan ; doses of five grains of calomel and half a grain of opium, at stated intervals of four or six hours ; larger doses of the same medicines, a scruple of calomel and

two grains of opium—all these methods often failed when the disease was established, not only with me, but with some of my colleagues who treated the disease in the fever wards; and yet I have no doubt that the mercurial treatment is entitled to confidence, although probably not to the same degree of confidence that it is in other climates.

The doctrine pretty generally taught with respect to the nature and treatment of dysentery did not apply to the form of that disease, which is under consideration. We are told that, before dysentery has long continued, the fæces are formed into compacted masses, and that the patient complains of a load in his intestines, with which they feel oppressed. The only complaint of this kind, which I heard, was of a sensation as if the lower part of the intestines had not fully discharged its contents producing tenesmus. We are directed to give purgatives, until the load felt by the patient shall have been removed, and we are told that purgatives have not performed their office until, by removing scybala, the cause of this sensation is removed, a rule which it is plain cannot apply to a disease, in which there are no scybala. Indeed that theory of the disease, which supposes the symptoms of dysentery to depend upon an accumulation of indurated fæces, will require to be reconsidered, when perhaps it will appear in this, as in other cases, that one of the effects of disease has been mistaken for its cause. In many instances purgative medicines seemed greatly to increase all the sufferings of the patient, and castor oil, the cathartic to

which a preference is usually given, frequently roused the dormant griping pain, so that it appeared that its right to be preferred in this disease, now almost prescriptive, had been too hastily conceded. Finally, we are often cautioned against venesection, which was certainly the remedy the least equivocal in its effects, the most uniformly useful of any which we employed in the Whitworth Hospital. Such modes of practice and cautelæ are doubtless applicable to many forms of the dysentery, otherwise they would not appear in the respectable works in which they are to be found, but their inapplicability in the present instance ought to lead to a distrust of the information contained in systematic works, and to greater confidence in those works which are the result of personal observation.

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Of the cases which were not attended with much fever or pain, which were admitted during the first few days of the disease, a purgative early in the morning, a dose of the compound powder of Ipecacuan, (10 grs.) early in the afternoon, and again at bed time, with low diet, (see p. 15) restored many to health; but to reduce our reliance upon this plan within just limits, it must be observed that, in several of these cases, the disease spontaneously ended, as the concurrent fever often did, in free perspiration.

When the disease assumed a more inflexible character, and was attended with considerable pyrexia, tenderness of the abdomen, mucous stools tinged

with blood, together with tormina and tenesmus; in this state I should prefer to the treatment by mercurials, the old proceeding namely, venesection; a purgative, giving a preference to the saline purgatives,—Epsom or Rochelle salts, or the crystals of tartar, very finely levigated, the former in mint water, with a small quantity of tartarized antimony (*gr. i. to ℥viii.* of the solution) in rose tea, or in a light infusion of columbo, the latter in large doses, half an ounce for a dose, moistened with a small quantity of water; then a bath in the evening, and lastly, an opiate, rendered diaphoretic, at bed-time; this method also was frequently successful, when used in an early stage of the disease.

When with pyrexia, the stools chiefly consisted of bloody mucus, and more especially when the abdomen was tender, venesection was never omitted, particularly after I had an opportunity of observing, in the numerous dissections which were made, the havoc wrought by the disease. The blood drawn was, in many cases, cupped and buffed; the tenderness of the abdomen was relieved by blood-letting; the character of the stools was sometimes immediately altered; purgative medicines often failed in producing a change in the appearance of the stools, while a large, feculent, loose stool, without straining, was not unfrequently passed after the loss of sixteen or eighteen ounces of blood, by patients who, for several days before, had passed nothing but mucus mixed with blood. Those who object to venesection in this form of dysentery have surely never witnessed the

great relief which profuse hæmorrhage from the bowels sometimes affords to the patient in dysentery.

But there were cases requiring a procedure still more decided ; cases wherein the disease had resisted the foregoing method so long as to excite an apprehension of extensive ulceration, or in which it began with unusual violence, or in which, after proceeding moderately for a time, symptoms of great danger suddenly arose ; as for instance, intolerance of the slightest pressure, agonizing pain, unceasing tenesmus, great pyrexia ; in these cases the method recommended by some of the late writers on tropical diseases\* was used with advantage. In the course of a single hour the patient has been largely blooded, has taken two grains of opium and a scruple of calomel, has had the warm bath, and been swathed in flannel,† by which means we have obtained breathing time to pursue our plans more deliberately. Were the same cases again to be placed under my care, I would not hesitate to prescribe opium in doses of four or five grains, as it was the opium chiefly which seemed to me to arrest the progress of the inflammation, and whatever in such a case procured respite for the patient from agony, sometimes proved of permanent benefit. After the large dose of calomel and opium, calomel in doses of five grains, with half a grain of opium, every third or fourth hour, was given till it produced ptyalism ; as

\* See Dr. Johnson's work.

† See Mr. Dewar's work.

soon as the mercurial influence was apparent from the state of the mouth, the mercurial was laid aside, and a mixture with balsam of capivi\* was given every fourth or sixth hour, from which the greatest relief was often obtained ; the fæces, from being of a bottle green, and mixed with mucus (the effect of the calomel and opium) and passed with tenesmus, became more natural in appearance, and were voided less frequently ; the patient considered himself cured, and in many cases his recovery followed, although not without interruptions, requiring various changes in the form of the anodyne ; such changes, it may be observed, were generally productive of benefit ; thus, the chalk julep, or catechu mixture, with laudanum, when the capivi draught lost its effect, were substituted. It results from a consideration of the cases in my possession that venesection, calomel, and opium, followed by the capivi mixture, with farinaceous diet, proved more successful than any other method which was adopted in the severest cases ; yet it often lamentably failed, of which sufficient evidence will be found in the table of unsuccessful cases. It ought not to be forgotten, that when the skin was restored to a natural state by the mercury, the case generally proceeded favourably.

It may be asked why was not mercury employed in all the cases ? Because often it did not act kindly, if I may so speak ; and when it did not, the course of the disease was not interrupted by it. Even in the earlier stage of the disease it sometimes failed of

\* See Dr. Pemberton's work.

relieving those patients, whose mouths were affected by it. Thus, for instance, I have seen the gums from mercury become tumid, remarkably florid and angry, without salivation. I have a case of this kind distinctly in my recollection, in which the mercurial was instantly discontinued, and baths, opium, and blisters employed; an amendment in the patient's situation took place in consequence; and when amendment had reached a certain point, the mouth became moist from a flow of saliva, and the patient continued to recover rapidly. It seems not unreasonable to suppose that mercury may affect the biliary organs in the same manner that it affected the salivary glands; that it may stimulate them beyond the point of secretion, and thus add to the patient's distress. That mercury, when it produced salivation, even in the earlier stages of the disease, was in many instances unequal to the cure, was established beyond a doubt. Thus, Rose Hayes, (see No. 20) was salivated on the third or fourth day of the disease, and her mouth was extremely sore. Her's was one of many instances, in which it appeared to me that mercury did not exert a benign influence on the constitution. The mouth, in some instances, could not be affected; in others it became sore without a corresponding flow of saliva; in others the saliva flowed excessively, the tongue became inflamed and swelled, and the worst description of the mercurial mouth was produced. In short, it appeared that the atmosphere of the hospital was a means of not merely maintaining the disease, but of counteracting the salutary effect of our most powerful remedy. I have

little doubt that mercury would have succeeded elsewhere, and that the patient would have recovered had she not been in the hospital. At one time, I think in the month of October, calomel with opium was often given in the beginning of dysentery without benefit. When the disease, as we conceived, had attained the ulcerative stage, mercury, which was given on the authority of Clarke, was injurious; but the transition from inflammation to ulceration, as I have already hinted, was not always well marked; finally, the mercurial treatment was of no service, and probably injurious in cases in which emaciation had taken place, and in which the tongue was florid and glazed.

Not so of the lancet, the beneficial use of which was not confined to the commencement of the disease. I have repeatedly ordered venesection, when there was reason to think that ulceration existed in the intestines, and with great temporary relief; and in a few cases, when followed by blisters, mild aperients and anodynes, the relief was permanent. When in the advanced stage of the disease there was much tenderness or pain confined to one region, leeches were preferred to the lancet; but it must be observed that the effusion of blood after leeches applied to the abdomen, when the patient is exhausted, ought to be watched: I have known patients, when neglected, sink in consequence of this effusion, who would have borne a moderate bleeding well.



I have already alluded to a time, during which mercury had nearly lost our confidence; at that time, when we were doubtful of all the means we had been employing in the cure of this disease, the Whitworth Hospital was visited by a Physician, who said that he thought every case in my wards admitted of cure; this was not expressed in a charlatanical manner, but from a misplaced confidence in his supposed panacea, which was cream of tartar. Having failed with the assistance of Jackson, Pember-ton, Johnson, and Armstrong, and the masters of former days, we received the suggestion coldly, particularly as the theory of the disease, which this gentleman had adopted, did not correspond with that which we had been led by frequent dissections to form. He said that crystals of tartar was a medicine powerfully antiseptic, the most so of any; and he conceived that dysentery essentially depended on the active operation of a prevailing septic principle in the body. However, the practice which he recommended was fairly tried. He administered the medicine, which he required to be very finely levigated, to many of the patients with his own hands. The dose to an adult was half an ounce, which was repeated every fourth or sixth hour. We soon discovered that this medicine, when taken precisely as prescribed, failed in many instances, but it must be allowed that some patients who took it were restored to health, who, I think, would have sunk under any of the methods of treatment then in use; and the white powders, as they were called, became a favorite medicine in the hospital during the

continuance of dysentery. The first dose of cream of tartar sometimes aggravated the patient's distress so much, that several individuals refused to take a second. But, when persevered in, it often brought down bile, and then by giving it only once or twice in the day, and alternating with it Dover's powder, the capivi, or chalk mixture, and using baths, the cure was completed. The gentleman who suggested the use of crystals of tartar, thought this medicine all sufficient, and those other means superfluous.

I suspect that the exhibition of large doses of crystals of tartar was first proposed by Selle, or some older continental author. In bilious dysenteries, Selle recommends "Vesicatorium abdomini imponendum, pulpaque tamarindorum, et cremore tartari ad aliquot uncias per diem, alvus movenda. *De dysenteria. Selle de curandis morbis, p. 157.*

In the property of bringing down bile, I think it must be admitted that the cream of tartar excels most other purgative medicines, and in this way its efficacy in dysentery may probably be explained, for that the suspension of the biliary discharge is a very important part of the disease few will deny, who have seen the great relief which sometimes, in this disease, follows a discharge of bile. An observation made by Home relative to cream of tartar is perhaps deserving of more attention than has been paid to it. He considers the efficacy of cream of tartar in dropsy to depend on its resolving obstructions in the liver; and he adds, that he has often used it with

great success in obstructions of the liver. *Clinical Experiments*, p. 383.

Castor oil, as I have already mentioned, often produced much aggravation of tormina and tenesmus, and hence when exhibited it ought to be combined with an opiate ; half an ounce or six drachms, combined with ten or twelve drops of laudanum ; and this, it may be remarked, is often an invaluable combination in irritations of the mucous membrane of the bowels, whether chronic or acute, which require aperient medicines. When castor oil was combined with rectified oil of turpentine, instead of being more severe in its operation,—productive of more uneasiness, it operated with less pain than when given without the oil of turpentine. This, which is also a valuable combination, borrowed from puerperal practice, and much used in Dublin, some times effectually reduced that tumefaction of the belly which often so much distressed the patient. The common saline purgatives appeared to us of more easy operation than purgatives derived from the vegetable kingdom, such as rhubarb, senna or castor oil, which, I believe, are chiefly applicable to that species of dysentery in which there are scybala to be removed.

A very full trial was given to injections, and of these I prescribed a great variety : laudanum in mucilage, starch or linseed tea, which produced the usual sedative effect ; and suppositories of opium were sometimes very useful. There were some pre

parations, not in general use as injections, tried, such as the black wash, a weak solution of the nitrate of silver, rectified oil of turpentine rubbed up with mucilage, but without any decisive result : much less irritation was produced by them than might have been expected, but they did not check the disease. Equal parts of lime water and milk, a pint of each, with the addition of laudanum, was found a very good injection. A solution of the superacetate of lead, combined with an opiate, ranked high with us. This salt of lead, combined with opium, has lately been given in dysentery by my friend Dr. Barker in the form of pills, and I think he reports favourably of it. In the diarrhœa, or dysentery of the latter stage of phthisis, which generally depends on ulceration of the intestines, these pills will be found a good palliative.

With respect to diet, farinaceous food seemed entitled to a preference. We endeavoured to avoid as much as possible any kind of nutriment which had a tendency to quicken the pulse, or to leave much fecal residuum.

## ABRIDGED CASES AND DISSECTIONS.

1. ——— Maher, *admitted* August 19th, 1818, into the Whitworth Hospital, on the fifth day of an attack of dysentery, which arose after fever. *Symptoms on admission.* Abdomen intolerant of pressure; tormina and tenesmus; mucous stools, tinged with blood; quick pulse. 21st. Very acute pain in the bowels. 24th. Excruciating tormina; unceasing tenesmus; extreme tenderness of the belly,—in extreme agony. 25th. Being the 11th day, Death. *Principal remedies.* 21st. *V. S. Pulv. Ipec. Comp. gr. x. 6tis horis. flannel swathe.* 23d. *Ol. Ricini cum Tinct. Opii.* 24th. *V. S. &c. Dissection.* Most extensive ulcerations of the great intestines; the largest portion of sound mucous membrane did not exceed an inch square; the exposed surface black, and in many parts eroded; in other parts the muscular fibres were of a natural appearance. The ulcerations stopped abruptly, at about three inches from the end of the ileum; the upper part of the small intestines was pretty sound.

2. Eliza Morris, æt. 34. *Admitted* 21st of August, on the 8th day of her illness. *Symptoms.* Tormina; frequent stools; anxiety; furred tongue;

quick pulse ; severe headach, and general pains. 22d. Tenderness of the epigastrium. 23d. Constant vomiting ; tormina ; bloody stools ; tenesmus ; great tenderness of the belly ; yellow and furred tongue ; insufferably bad taste ; excessive thirst ; prostration. 25th. Quick returns of tenesmus, with scarcely any evacuation ; black tongue. 27th. Being the 14th day, Death. *Remedies.* 21st. *Hirudines Temporebus.* *Oleum Ricini cum Tinct. Opii.* 22d. *Hirudines* xii. *Epigastrio.* *Vesicatorium Nuchæ.* *Pulv. Ipec. Comp.* 23d. *Mist. Olei Ricini cum Tinct. Opii & Vin. Ipecac.* 26th. *Sol. Sulph. Magn. in Infus. Rosæ cum Tinct. Opii.* *Dissection.* Effusion of yellow lymph, with a granulated surface, on the villous coat of nearly the whole of the jejunum, which effusion could easily be separated in the form of a membrane ; the mucous membrane vascular and thickened. The large intestines were slightly thickened, and more vascular than natural ; numerous circular small depressions, circumscribed and vascular, not larger than a pin's head, occupied the whole extent of their mucous membrane. In the centre of the colon the mucous membrane was rough, granulated ; the granulations grey, and interspersed with very superficial erosions.

3. Mary Mahon, æt. 28. *Admitted* September 6th, on the 5th day of her illness. *Symptoms.* Tenderness of the epigastrium ; general pains ; headach. To the tenderness of the epigastrium, and general pains, were added oppression of the chest, cough, and copious expectoration. September 14th.

Incessant cough, and expectoration ; severe tormina ; discharge of blood by stool. September 16th. Relief of the dysenteric symptoms ; aggravation of the pulmonary disease ; extreme prostration. September 18th. Death. *Remedies.* September 6th. *Hirudines duodecim epigastrio.* 14th. *Oleum Ricini.* *Pulv. Ipec. Comp.* *Dissection.* The lungs in a state of great sanguineous congestion ; their substance preternaturally firm ; the trachea and its ramifications contained a large quantity of thick glairy mucus. The mucous membrane of the large intestines, throughout its whole extent, had its vascularity much increased, but was free from ulceration.

4. Michael Hagan, æt. 37. *Admitted* September 9th, being the 9th day of dysentery, which he attributed to his having sat on the damp grass when overheated. *Symptoms.* Tormina ; frequent desire to go to stool ; stools small, and consisting of mucus, slightly tinged with blood ; abdomen tense and tender ; tongue grey, clean at the edges ; thirst ; pulse 96. 10th. Pure blood by stool. 11th. Dryness of the skin ; vigilance. 12th. Brown tongue ; hiccup. 13th. Excessive thirst. 15th. Anorexia ; languor ; a fibrous substance observed in the feces. 19th. A stool every quarter of an hour. 21st. Extremities cold. 22d. Gums affected with mercury. 23d. Breathing suspicious, slow, laborious, wheezing ; excessive debility. 24th. Being in the 4th week of his illness, Death. *Remedies.* 9th. *V. S. Balneum.* *Pulv. Ipec. Comp.* 11th. *V. S. Tart. Sodæ et Kali in Mist. Salina.* *Enema Amyli.* 12th.

*Opii gr. i. 4tis. horis. Aq. Calcis. Flannel roller, &c. 15th. Hydr. Subm. Pulv. Ipec. aa. gr. i. Opii gr. ʒ 2dis. horis. 21st. Mist. Catechu. Wine, Sago, &c. Dissection.* Left lung and parietes adherent. Gall bladder empty. Stomach coated with a yellowish glairy secretion. Very vascular patch to the right of the œsophagus. Yellow feces in the small intestines; dark green in the large. Mucous membrane at the end of the ileum highly vascular. All the coats of the colon thickened; its mucous membrane of a dark bottle green, collected into rugæ, and studded with small round ulcers. Lower end of the colon, and upper end of the rectum, coated with numerous small depositions of lymph, beneath which the surface was not ulcerated.

5. Sally Cox, widow, æt. 56. *Admitted* September 14th, on the 8th day of dysentery, with which she was attacked in the second week of a fever, which she thought arose from cold. *Symptoms.* Has just passed about half a pint of blood mixed with mucus. Abdomen tense and tender; tormina; tenesmus; anorexia; tongue brown, furred, dry in the centre; moist at the edges; pulse 108. 16th. Skin hot; pulse 120, hard. 18th. Frequent stools of a greenish yellow colour; strength sunk, lethargic; pulse small; hiccup; tenderness of the right hypochondrium. 19th. Being about the 12th day, Death. *Remedies.* September 14th. *Pulv. Ipec. Calom. a gr. i. 2dis. horis. 15th. Vesicatorium. 16th. V. S. 18th. Vini Ipec. ʒss. Haustus Anod. Dissection.* Mucous membrane of the last four inches



of the ileum highly vascular. Great intestines vascular externally; their coats thickened; mucous membrane very vascular, and every where beset with small ulcers, which, with one exception, affected that membrane only; one large ulcer in the transverse arch of the colon penetrated to the peritoneum. The rectum, about four inches from its termination, when held up to the light, looked like a sieve, from the number of ulcerations.

6. Judith Macabe, widow, æt. 30. *Admitted* September 15th, having laboured under dysentery for two months. She had an attack of fever about two months ago, and a second attack about five weeks ago, both attended with symptoms of dysentery; the fevers were supposed to have arisen from having lain on a damp floor. *Symptoms.* Tenderness of the abdomen; tormina; frequent desire to go to stool; scanty discharges, chiefly of mucus, mixed with blood; tenesmus; tongue white and furred; anorexia; pulse 114, hard; skin hot. 16th. Cough. 17th. Dyspnoea; dysury; oedema of right foot and hand; sudden and remarkable debility; many brown loose stools without tormina. 18th. Great restlessness; short, teasing, loose cough; respiration 54; pale; lips livid. 19th. Countenance cadaverous. Death, being in the 10th week. *Remedies.* September 15th. *Hydr. Subm. gr. i. P. Ipec. gr. iss. Opii gr. ½ Siis horis.* 18th. *Vesicatorium amplum. Mist. Camphoræ cum Liq. Æth. Oleos.* *Dissection.* Some fluid in the thorax. An accumulation of blood in the substance of the lungs. Two abscesses in the

liver, one large and full of purulent matter. Commencing at the ileum, there were numerous broad irregular ulcerations, many of which were covered with sloughs penetrating to the peritoneal coat, these were more numerous as they approached the anus.

7. Thomas Campbell, æt. 20. *Admitted* September 19th, on the 5th day of his illness, which arose during slow recovery from a fever, which commenced five or six weeks ago. *Symptoms.* Abdomen tense, and intolerant of pressure; a stool, nearly consisting of pure blood, passed every quarter of an hour; tenesmus; pulse 102; a brownish yellow furring of the tongue. 20th. Umbilical region very tender. 22d. Tongue much loaded. 27th. Debility increasing, with delusive hope. 28th. Fleishy-like substances passed by stool. 29th. Suddenly attacked with dyspnœa. 30th. Colliquative sweats. October 1st. Extreme weakness; patch of red on the wasted cheek. 2d. Tormina; tenesmus gone; great oppression of the breathing. 3d. Being about the 20th day, Death. *Remedies.* 19th. *V. S. Hyd. Subm. Pulv. Ipec. a gr. i. 2dis. horis.* 20th. *Hirudines. Mistura Catechu cum Tinct. Opii.* 22d. *Pulv. Ipec. ʒi.* 23d. *Mist. Sulph. Mag. cum. Ant. Tart. Opii gra. ii. Hydr. Subm. gra. vi. h. s. Enema Amyli cum Tinct. Opii. Balneum.* 27th. *Mistura Copaibæ cum Tinct. Opii.* 29th. *Vesicatorum Sterno.* *Dissection.* Blood in the interstitial substance of the lungs; puriform matter issued from the bronchia; liver in a state of much sanguineous congestion;

small round ulcerations of the mucous coat from the commencement of the colon, which increased in number as the rectum was approached. Coats of the great intestines thickened. Mucous membrane of the rectum rough, and elevated into points, covered with depositions of lymph, and beset with extensive ulcerations.

8. Neill Harkan, æt. 22. *Admitted* on the 20th of September, being the second day of his illness, which arose during recovery from a protracted fever. *Symptoms.* Mucous stools slightly tinged with blood, tenesmus; debility; confusion of intellect; p. 96; skin hot; tongue furred and brown; thirst. 22d. *Remitted* to the Fever Hospital. October 7th. *Re-admitted.* 8th. Abdomen intolerant of pressure, especially the hypogastric region. 27th. Emaciation; debility. 28th. Short teasing cough, with inability to expectorate; countenance sunk. 30th. Tongue black; suffocation; sore throat. November 1, being about the end of the 6th week, Death. *Remedies.* September 20th, *V. S. Sulph. magn. in aq. menthæ. Hydr. subm. Pulv. ipec. comp. aa. gr. sex, 8vis horis.* October 7th. *Enema superacetatis, plumbi, &c. Mist. Copaibæ. Flannel roller, &c.* 12th. *Opii gr. duo. Hydr. subm. gr. xv.* 19th. *Enema Lot. Hydrarg. nigr.* 27th. *Mistura Cretæ, &c.* *Dissection.* Lungs contained an unusual quantity of florid blood. The coats of the great intestines were thickened and indurated, their mucous membrane ulcerated throughout its whole extent; speckled with many dark blue spots, which increased in number

towards the rectum. The muscular fibres in many places laid bare, as if by careful dissection. There were numerous cavities between the mucous and muscular coats of the rectum, large enough to contain peas; these were filled with a gelatinous matter.

9. John Conolly, æt. 48. *Admitted* September 21st, after an illness of three weeks, which arose during recovery from a fever, in which the head and stomach were much affected. *Symptoms.* Tormina; frequent scanty mucous stools of a greenish colour; tenesmus; abdomen tense and tender on pressure; tongue brown; much thirst; anorexia; pulse 102. 22d. Vigilance; some dyspnœa; tongue with a brown coating. 23d. Stools like chopped spinach; p. small. 25th. Much debility. 26th. Subsultus; harassing thirst. Death about the end of the 4th week of his illness. *Remedies.* 21st. *Hydrarg. Subm. Pulv. Ipec. aa. gr. i. Opii gr. ½ 3tiis horis. Fov. abdomen. Balneum.* 22d. *Pulv. Ipec ʒi.* 25th. *Mist. Copaibæ.* *Dissection.* The whole extent of the internal surface of the great intestines ulcerated; by the larger ulcers the mucous coat was entirely destroyed. The lower part of the colon was much contracted. The internal surface of the stomach was of a deep red colour.

10. John Spencer, æt. 50, *admitted* September 23d, after an illness of three weeks, which arose while he was apparently recovering from a fever, without any remarkable symptom. *Symptoms.* Had

suffered much from tormina and tenesmus. Thin green stools ; white tongue ; anorexia ; p. 96. 24th. Return of tormina ; extreme thirst ; tongue furred at the apex. 26th. Stools like flummery. October 1st. Bowels moved immediately after taking drink. 2d. Hiccup. 4th. Hiccup produced by taking drink. 5th. Great languor. 7th. Extreme debility, 8th. Despondency ; great thirst. 9th. Death, about the end of the 5th week. *Remedies.* September 23d. *Pil. ex Opio, Pil. Hydr. & Pulv. Ipec. Enemata.* 24th. *Mist. Capaibæ.* October 2d. *Enema superacetat. Plumbi, &c. Vinum.* 5th. *Pulv. Doveri h. s.* 6th. *Mist. Cretæ.* 7th. *Tapioca, &c. Dissection.* Vena portarum distended with blood. Veins of the stomach turgid ; caput coli contracted ; its villous coat partly superficially ulcerated, partly coated with lymph. The colon in a similar state ; its ulcerations were larger, and black spots were interspersed. In the rectum the black gangrenous looking spots were numerous ; here also the ulcerations did not penetrate deeper than the mucous membrane. Black spots were observed in the meso cæcum.

11. Farrel Reilly, labourer, æt. 58. *Admitted* Sept. 24th, in the 3d week of his illness, which arose during convalescence from a fever, which was attended with tormina, and was attributed to fatigue. *Symptoms.* Tormina ; tenesmus ; thin, brown, bloody stools, extreme tenderness of the umbilical region ; clean tongue ; thirst ; anorexia ; pulse 120, and weak ; extreme exhaustion. 25th. *Vigilance.*

Cessation of tormina, tenesmus, and tenderness of the abdomen, the stools flowing involuntarily ; tongue with a brown fur. *Remedies.* 24th. *Hirudines.* *Balneum.* *Hydr. Subm.* 25th. *Mist. Copaibæ.* *Dissection.* Liver loaded with dark blood. Mucous membrane of the large intestines thickened, its folds one-third of an inch thick, dense and rough. Surface of the membrane beset with ulcers, from an inch to a few lines in diameter, formed by destruction of the membrane, which, in some places, had sloughed. Internal surface of the stomach deep red ; of the duodenum brighter, with numerous bloody dots. Mesenteric glands enlarged.

12. Thomas Cullen, sailor, æt. 40. *Admitted* September 26th, on the 5th day of illness, which began when he was about a week convalescent from a third attack of fever, during which his bowels were not affected. *Symptoms.* His stools consist of flocculent mucus, with much blood ; they are preceded by tormina followed by tenesmus. Tongue white and furred ; thirst considerable ; pulse 78. 28th. Stools like spinach mixed with blood. 29th. Slight pytalism ; abatement of disease. October 1st. Gums sore, but no spitting ; debility. 3d. Stools pale grey. 7th. Sickness and oppression. 8th. Straining without any discharge. Nov. 6th. CEdema of inferior extremities. 12th. Emaciation ; delusive hopes. Tongue of a brick red colour. 27th. A thin reddish fluid flowing incessantly from the bowels. 28th. Death, at the end of two months. *Remedies.* September 26th. *V. S.* *Hydr. Sub. gr. v.* *Opii gr.*

*ss. 4tis. horis. 27th. Balneum. October 1st. Hydr. Subm. et Opium. 7th. Vin. Ipecac. Nov. 6th. Enema Sol. Nitratis Argenti, &c. 8th. Ol. Ricin. cum Tinct. Opii. Mist. Copaib. 10th. Mist. Angust. Suppositories, lead glysters, Lime Water ditto. Ac. Nitr. cum opio. &c. Dissection. Liver of a dark colour. Duodenum very vascular. Mucous membrane of the great intestines of a blackish brown colour. Superficial ulcerations of an oval form in the colon; more numerous in the transverse arch. The descending colon much ulcerated, the ulcers penetrating to the muscular coat. All the coats of the intestines thickened. The last three inches of the rectum nearly sound.*

13. Mary Ryan, widow, æt. 40. *Admitted September 28th, after an illness of five weeks. Symptoms. Tormina; stools frequent, small, mucous, and tinged with blood; tenesmus; tongue foul; pulse quick; skin hot. 30th. Stools bloody, with a fleshy like substance intermixed. Abdomen tender, pulse 120. Tongue white, clammy; thirst; anorexia. October, 1st. Pulse 150 and small; tongue black; languor. 2d. Vomiting; moaning; supine; extreme prostration and oppression. 3d. Death, in the 6th week of her illness. Remedies. September 28th. Hydr. Submur. ʒi Opii. gr. duo. Hydr. Submur. gr. quinque Opii gr. ss. 6tis. horis. Balneum. Flannel roller and compress. October 1st. Mist. Camph. cum Tinct. Opii et Liq. Æth. Ol. &c. Dissection. Thin greenish fæces in the small intestines, interspersed with a few hard*

lumps. Large intestines thickened. Mucous membrane rough, irregular, tuberculated, and with numerous superficial ulcers having elevated edges ; their surfaces smeared with a substance like the pigmentum nigrum ; little vascularity of the intestines. A size injection did not penetrate the tubercles.

14. Esther Derham, widow, æt. 45. *Admitted* on the 1st of October. She had probably laboured under fever, as her head had been recently shaved. *Symptoms.* Incoherent. Stools involuntary. Abdomen tense and tender. Tongue furred, pulse 144. Resp. 42. Skin cool. October 2d. Stools frequent and bloody ; tongue swollen and brown ; respiration hurried ; extremities cold ; pulse scarcely perceptible. 3d. Death. *Remedies.* October 2d. *Mist. Cretæ*, ℥vi. *cum Tinct. Opii*. ʒi ss. *Vini Ipec.* ℥iii. ʒi. *Post sedes liquidas.* *Dissection.* Turgescence of the vessels of the mucous membrane of the colon. The surface rough, and elevated into hard and grey horizontal rugæ. Great vascularity of the rectum. No appearance of ulceration in the small or great intestines.

15. James Nagle, servant, æt. 64. *Admitted* on the 1st of October, having been nine weeks ill. His illness was supposed to arise from drinking ale and butter milk. *Symptoms.* Tormina, tenesmus, and frequent stools ; stools muddy red, and consisting chiefly of blood ; abdomen tense and tender ; tongue white ; anorexia ; pulse 102. 2d. Voided



several tough strings of coagulable lymph. Tenderness of the lower part of the abdomen. 3d. Tongue furred; thirst. 8th. Rapid pulse. 11th. Involuntary stools. October 12th. Death in the 11th week. *Remedies.* *Enema Superacetat. Plumbi.* 3d. *Mist. Catechu, &c.* 5th. *Decoct. Angust. &c.* *Enema Infusi Lini cum Tinct. Opii.* Wine, &c. *Dissection.* Liver enlarged, jejunum vascular; caput coli gangrenous; a hole in the iliac portion two inches in diameter. Villous coat of the colon in a sloughy state, and ulcerated in the sigmoid flexure; the three coats sloughy. The villous was detached, but preserved its cylindrical form. Vessels of the rectum in a turgid state; all its coats thickened. Increased vascularity in many parts of the peritoneum.

16. Martin Dunn, soldier, æt. 29. *Admitted* on the 3d October, having been upwards of three weeks ill. *Symptoms.* Emaciation; frequent dark brown stools without blood; fullness of epigastric and right hypochondriac regions; tongue white and furred; anorexia. 4th. Thirst; vomiting of greenish matter; feeble pulse; tremors; tormina; tenesmus; brown tongue with glazed edges; sordes on the teeth; prostration; lethargy. October 7th. Death, at the end of 4th week. *Remedies.* 3d. *Mistura Copaibæ.* *Enema Acetat. Plumbi.* *Vinum.* *Dissection.* Right lung adherent. Liver tuberculated, its left lobe diminished. Spleen hard and enlarged. Mucous membrane of the great intestines vascular, beset with small ulcers, having coagulated lymph between. In the rectum there were several

inches of the mucous membrane lined with coagulable lymph, on either side of which there were numerous ulcerations.

17. Bryan Kearns, labourer, æt. 40. *Admitted* October 11th, having been three weeks ill. The complaint arose after exposure to cold. *Symptoms.* Tormina ; frequent thin dark brown stools ; tenderness particularly of right hypochondrium, which was tumid ; vomiting ; pulse 168, and feeble ; hiccup. October 12th. Death, about the end of third week. *Remedies.* 11th. *Haust. Olei Ricini, &c. Hirudines* xii. *parti dol. Balneum Vespere. Pulv. Ipecac. Comp.* 3i. *h. s. Dissection.* Gall bladder turgid. Biliary fluid in the stomach. Duodenum vascular. Ileum ulcerated ; ulcerations about a line in diameter. Caput coli sphacelated. Great part of the colon destroyed ; its contents in the cavity of the abdomen. Mucous coat of the rectum sphacelated. Dark spots in the mesentery and mesocolon.

18. Mary Dunne, widow, æt. 23. Catamenia regular. *Admitted* October 24th, having been three weeks ill. Illness commenced on the 3d, after the crisis of fever, with pain in the epigastrium. *Symptoms.* Constant pain, and a tumour in the epigastrium ; lips livid ; respiration hurried ; tongue white ; anorexia ; pulse 96. Belly regular. 27th. Though her mouth was very sore from mercury, the pain, which had subsided, recurred. Six loose stools in the night. 31st. Passed blood by

stool ; pain subsiding. November 7th. Return of epigastric tumour with tenderness ; hurried respiration and dysenteric symptoms. 13th. Large quantity of purulent matter evacuated from the tumour by incision. Irritability of stomach. 15th. Vomiting of bloody fluid. Purging of ditto. November 16th. Death, at the end of sixth week. *Remedies.* October 26th. *V. S. Submur. Hydrarg.* ℥i. *Opii gr.* ii. *R. Submur. Hydr.* ℥i. *Opii. gr.* iii. *M. ft. Pulv. No. vi. S. 1 quarta q. q. hora* *Hirudines.* 28th. *Haust. Anod. Balneum.* 31st. *Haust. Efferv. cum Tinct. Opii. Cataplasma. Emoll. Vinum. Enemata Amyli, &c.* *Dissection.* The cavity of the abscess in the liver was so contracted as not to be more than large enough to contain a walnut. There was a second small abscess in the right lobe of the liver. The colon and the folds of the peritoneum attached to it much thickened ; its mucous membrane hanging in dirty shreds, as if in a state of slough.

19. John Smyth, labourer, æt. 42. *Admitted* November 3d. Duration of illness uncertain. *Symptoms.* Severe pain in the bowels ; stools green ; abdomen tender and impatient of the slightest pressure. 4th. Pulse hard. 6th. Violent attack of colic ; tenderness of the abdomen. 7th. Bowels confined. 9th. Tormina ; frequent small red stools. 12th. *Remitted* to the fever ward. *Remedies.* November 2d. *Hirudines. Haustus Olei Ricini cum Oleo Terebinth.* 4th. *V. S. Balneum.* 5th. *Enema Terebinth.* 6th. *V. S. Balneum. Haust. Olei Ricini.*

*Pulv. Ipecac. Comp. Dissection.* Last two inches of the mucous membrane of the ileum apparently gangrenous. Coats of the large intestines thickened. Two perforations of the colon from ulceration. Escape of feces. Mucous membrane in a shreddy state, apparently from sloughing. Within six inches of the anus it became sound.

20. Rose Hayes, æt. 25. *Admitted* November 9th, having been three days ill. Dysentery commenced on the day after her admission in fever into the Richmond General Penitentiary. *Symptoms.* Tormina; tenesmus, and bloody stools; skin hot; pulse 108; has had a cough for six months; catamenia absent two years. November 10th. Ptyalism. 13th. Abdomen impatient of pressure. 15th. Stupor; incoherence; bowels more natural. 17th. Gradual sinking of strength. 18th. Death, after twelve days sickness. *Remedies.* November 9th. *V. S. & Pulv. Ipecac. Calom. aa gr. xii. Opii gr. iss. M. ft. Pulv. xii. s. 1. tertiis horis.* 13th. *Pulv. Ipecac. Comp. Si. Sol. Sulph. Magnes.* 15th. *Vinum. Misnar. Camph. &c.* *Dissection.* Liver contained an unusual quantity of dark blood. Spleen diseased. Intestines sound, save the rectum, the mucous membrane of which was slightly tuberculated, and somewhat more vascular than natural. The tuberculated appearance arose from a granular deposition of lymph.

21. Amelia Crow, æt. 40. *Admitted* November 11th, having been four days ill. The disease began

during convalescence from fever. *Symptoms.* Tension and tenderness of the abdomen ; tormina ; tenesmus, and bloody stools. November 13th. Pulse 116. 16th. Languor ; apathy ; inability to protrude her tongue, which is dry, clean, and as it were varnished. 18th. Involuntary stools ; pulse 160. 19th. Supine ; breathing laborious ; countenance sunk ; mouth sordid. November 20th. Death, at the end of a fortnight. *Remedies.* 11th November. *V. S. Sulph. Magnes. in Aqua Menthæ. Balneum.* 13th. *Hydrarg. Submur. ℥ii. Opii gr. ii. M. ft. Pulv. viii. s. l. sextis horis.* 16th. *Mist. Copaibæ. Vinum.* *Dissection.* Bronchial tubes containing a large quantity of white mucus. A number of calculi in the pelvis of the right kidney. The only diseased appearances in the intestines were a few puncta of the mucous coat, at the termination of the rectum, and a deposition of lymph in a small portion of the sigmoid flexure of the colon.

22. Mary Baillie, æt. 23. *Admitted* November 14th, having been five weeks ill ; no fever ; health previously good ; catamenia regular. *Symptoms.* Is afraid to drink, lest it should send her to stool ; tormina ; tenesmus ; stools yesterday were bloody ; stitch in the left side ; great tenderness of epigastrium ; hiccup ; pulse 114. November 15th. Death, after five weeks illness. *Remedies.* 14th. *Hirudines. Balneum. Hydrarg. Sub. Mur. ℥i. Opii gra. ii. M. post horas duas. Sol. Sulph. Magn. Alvo subducta Bol. e Cal. et Opio sextis horis.* *Dissection.* Great intestines thickened. Mucous membrane almost de-

stroyed by ulceration, which extended from a few inches above the valve of the ileum to the anus, where the ulcerations were confluent; there were every where attached to the ulcers dirty brown shreds, like parts in a state of slough.

23. Thomas Sherly, æt. 21, Brass Turner. *Admitted* November 16th, having been ill eleven weeks. Cause—exposure to cold. *Symptoms.* Tormina; tenesmus; frequent stools (no longer bloody), green and watery; tenderness of the epigastrium; tongue white, furred; pulse 120; countenance sunk; cough. November 19th. Skin very hot. 22d. Tongue florid; blistered. 23d. Stools like grumous blood, without smell. 27th. Oppression of chest, and cough. December 4th. Much emaciation; swelling of feet; sore throat. 21st. Sudden attack of debility, and sinking. 31st. Mouth blistered. On the 2d of January, death, after between four and five months illness. *Remedies.* November 16th. *Balneum.* *Pulv. Dov.* Flannel roller. November 17th. *Pil. Hydrarg. Opium & Pulv. Ipecac.* 27th. *V. S.* December 3d. *Haust. Anodyn.* 7th. *Mist. Copaibæ.* 21st. *Vinum. Mist. Anod. &c.* *Dissection.* Inflammation, abrasion, ulceration, and sloughing of the colon; more remarkable in the ascending and transverse arch than towards the rectum. Ulceration and slough of the internal surface of the caput coli, and valve of the ileum. Colon contracted; its coats thickened. Mesenteric glands enlarged and hard. Colon adherent to the liver; a circumscribed

tumor, containing cheesy matter, in the surface of its right lobe. Lungs tuberculated.

24. Mary Burne, widow, æt. 54. *Admitted* November 19th, having been ill seven weeks, after fever, followed by anasarca. *Symptoms.* Debility; tormina; tenesmus; umbilical region tender; emaciation; stools no longer bloody; tongue brown and crusted; thirst; pulse 108, weak. 22d November, Abdomen impatient of pressure; debility increasing; great tremor of the hands; anxious to have wine. 24th. Sudden weakness, and raving in the night; laborious respiration; countenance sunk; eyes staring; involuntary stools of a natural appearance. November 24th, death in the eighth week. *Remedies.* November 19th. *Mistura Catechu cum Tinct. Opii.* 22d. *Vinum.* *Dissection.* Lungs more solid than usual. Liver large, pale, and flabby. Numerous and extensive ulcerations from the transverse arch of the colon to the anus. The rectum less ulcerated than the colon. The ulcerations were large, circular, collected into groupæ, and laying bare the muscular fibres; their edges were smooth and prominent; the intervening membrane was sound, unless in the centre of the descending colon, where it was much thickened and elevated.

25. John Gibbons, sailor, æt. 35. *Admitted* November 19th, having been ill two months; illness arose after a fever. *Symptoms.* Tormina; frequent bloody stools; tenesmus; tenderness of abdomen; tongue white; thirst; skin dry and rough. 22d. Cough. 23d.

Skin very dry, 25th. Large and painful hæmorrhoids. 27th. Involuntary stools. December 2d. Great emaciation. 22d. The emaciation and debility remarkably increased. 30th December, death, between the third and fourth month. *Remedies.* November 19th. *Calom.* *Opium et P. Ipecac.* *Balneum.* 23d. *Mist. cum Vin. Antim.* 25th. *R. Acidi Nitrici*  $\text{3iii}$ . *Opii gr.*  $\text{iii}$ . *Aquæ*  $\text{3ii}$ . *M.*  $\text{3i}$ . *ter de die, e cyatho aquæ.* 27th. *Vesicat.* *Mist. Catechu.* 28th. *Pulv. Dov.* December 16th. *Cryst. Tart.* *Dissection.* High inflammation, thickening, abrasion, and ulceration of the mucous membrane of the colon. In the descending colon the mucous surface was destroyed, with the exception of here and there small portions, with vascular edges as clean as if cut with a knife. Mesenteric glands enlarged.

26. Patrick Nowlan, labourer, æt. 34. *Admitted* December 5th, having been ill fourteen weeks. No fever. *Symptoms.* A stool every hour, consisting of grumous blood and pus, with a little feces. Emaciation. Tongue moist and furred. Pulse 80. 13th. Was almost constantly at stool all night. 17th. Great exhaustion. 22d. Umbilical region very tender on pressure. Great soreness in the bowels after stool. 23d. Extreme exhaustion. On the 25th December, death, after 17 weeks illness. *Remedies.* December 5th. *Super Tart. Kali.* 9th. *Mist. Bals. Copaib.* 17th. *Mist. Cretæ cum Tinct. Opii & Vin. Ipec.* 19th. *Pil. Opii gr.*  $\text{v}$ . *sextis horis.* 22d. *Pulv. Doveri.* 23d. *Wine, Sago, &c.* *Dissection.* Serous effusion under the arachnoid.



3i. of fluid in either ventricle. There remained no sound mucous surface from the valve of the ileum to the end of the transverse arch of the colon, except one patch about an inch in diameter; from that point to the anus there were numerous portions of mucous membrane, which had not the appearance of abrasion.

27. Amelia Henry, æt. 30. four months pregnant. *Admitted* December 4th, after having been five weeks ill. Lay in the same bed with her husband, who had dysentery. No fever. *Symptoms.* *Tormina*, tenesmus, and frequent stools, which have been bloody, with slime; epigastrium tender; pain in either side of it; vigilance; skin dry; tongue white; anorexia; pulse 120. 7th. Much epigastric tenderness; pulse feeble; deep red patch on either cheek. 8th. Excruciating pain of side; continued tenesmus without any discharge; abdomen tender. 10th. Aborted. 12th. Stupor; involuntary discharges from the bowels. December 12th, after six weeks of illness, death. *Remedies.* December 4th. *V. S. Sulph. Magnes. in Aqua Menthæ.* 5th. *V. S. Super Tart. Kali.* 8th. *Vesicatorium. Opium. Haust. Rhei.* 9th. *Balneum. Mistura Copaibæ.* 11th. *Calom. ʒi. Opii gr. ii.* *Dissection.* A very extensive abscess of the liver, which contained nearly six pints of whey-like matter, mixed with flakes of lymph; large masses of which were connected with the walls of the abscess. At the lateral and posterior part of the right lobe, it

seemed inclined to point. The mucous membrane of the great intestines was extremely ulcerated.

28. Michael Henretty, shoemaker, æt. 40. *Admitted* December 7th, having been ill a month. Just before he fell sick, had slept in the same bed with a young man in dysentery; had been a hard liver. *Symptoms.* Abdomen tender; frequent stools of bloody mucus and purulent matter; tongue white, furred; excessive thirst; anorexia; pulse 76; hæmorrhoids, with heat and pain in the rectum. 11th. Aggravation of symptoms. 15th. Sickness of stomach. 19th. Inclination to go to stool whenever he takes food. 26th. Strength sunk. 28th. Severe pain in the right side; painful inspiration; pulse 80; feeble. 29th. Hiccup. 30th. Stools more natural; sore throat; delirium. December 31st, end of eighth week, death: *Remedies.* December 7th. *Pil. Hydr. et Opium.* 10th. *Super Tart. Kali.* 12th. *V. S. Calom. ʒi. Opii gr. ii. Balneum.* 13th. *Cal. et Opium.* 17th. *Mist. Cretæ cum Vin. Ipec. Tinct. Opii et Pulv. Rhei.* 24th. *Vinum.* 25th. *Vesicatorium. Opium. Turpentine Liniment.* *Dissection.* Irregular ulcers on the whole of the mucous membrane of the intestines; some of them several inches in circumference; the intervening membrane thickened. Several considerable portions of membrane in a state of slough, and loose in the colon, particularly in the cœcum and in the rectum also. Small intestines sound. Liver very large and full of abscesses containing

yellow pus. Numerous opaque spots on the internal membrane of the descending aorta.

29. Mary Kelly, æt. 19. *Admitted* December 15th. Two days ill; illness commenced during convalescence from fever, supposed from cold. *Symptoms.* Fixed pain of abdomen; tormina; tenesmus, and frequent bloody stools; vomiting; white tongue. 18th. Frequent hard pulse; hot dry skin. 19th. Retching; excruciating tormina; tenesmus; abdomen intolerant of the slightest pressure; hurried breathing. 21st. Restlessness; hiccup; burning at the scrobiculus cordis; retching. 23d. Convulsions. Died December 29th, on the tenth day. *Remedies.* 15th. *V. S.* *Calom.* ℥i. *Opii gra.* ii. *M. Opii gr. ss. Calom. gr. v. quartis horis.* 16th. *Balneum. Vesicatorium.* 18th. *Cryst. Tart.* 20th. *Hirrad. xx. Enema Amyli. Foveatur abdomen. Opium et Calom.* *Dissection.* An ounce of serum in each lateral ventricle; serum in the spinal canal. The great intestines thick, and rather contracted. Mucous membrane thrown into longitudinal plaits, and purple from excessive vascularity, which was greatest on the ridges, where there were several points resembling lymph.

30. Marcella Melia, æt. 16. *Admitted* December 15th, having been five days ill. Illness commenced during fever. *Symptoms.* Tormina; frequent green mucous stools, with blood; tenesmus; tongue white; skin hot; pulse frequent. 21st. Abdomen intolerant of pressure; pulse 120; cheeks

flushed. 23d. Languor. 25th. Stools pure blood ; lethargic ; hiccup. 26th. Pulse 144. 27th. Raving ; tongue dry ; thirst great. 28th. Face hippocratic ; involuntary stools ; short cough ; unable to expectorate. Died December 29th, on the 19th day. *Remedies. Super. Tart. Kali.* December 21st. *Hirudines. Mist. Cretæ. cum Rhei Pulv. &c.* *Dissection.* Large intestines united to the omentum in a thick mass. The mucous membrane universally ulcerated ; the ulcers with well defined vascular elevated edges, somewhat sloughy in their centre ; the peritoneum corresponding to these ulcers was highly vascular. The mucous membrane between the ulcers was of a dirty green colour.

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## SUPPLEMENT,

INCLUDING AN ACCOUNT OF DYSENTERY AS IT AP-  
PEARED IN THE 79TH REGIMENT, AT LIMERICK,  
IN THE YEAR 1821.

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IN the years 1819, -20, and -21, during the autumn, there has been an evident disposition to dysentery among the inhabitants of Dublin ; but, when compared with its character in 1818, it has appeared

as a more tractable disease. In September 1819 five patients were admitted into the Whitworth Hospital, who, with one exception, recovered. The individual who died was in a hopeless state, and did not survive his admission more than a day.

In 1820 cases of dysentery occurred, and were rather more observable in private practice than in 1819. The disease in some few families existed in its severest form. I had an opportunity of witnessing part of its ravages in one family, the description of which, drawn up by my friend, Dr. Charles Johnson, of Anne-street, I shall here introduce. This narrative is valuable in many respects, but chiefly as it seems to establish the contagious nature of dysentery in this particular instance.

“Captain J. removed his family from the North of Ireland in the month of September 1820, in consequence of the death of his eldest son from pulmonary consumption. The change of scene, he hoped, would more quickly dispel the gloom which hung over his family. After remaining a few days in Dublin, they took up their residence about four miles distant, at Wilbrook, near Rathfarnham, on the 20th September.

Four days after, Miss J. (No. 1.) was attacked by dysentery. Medical advice was not procured till the 30th, and on the 3d of October she died. As far as I could learn the dysentery terminated in enteritis.

Miss M. J. (No. 2) was slightly affected at the same time, but in the anxiety occasioned by her sister's illness and death, the symptoms were either suspended or overlooked. On the 4th she and Mrs. J. removed to the house of their friend, Mrs. B. Rathmines Terrace,\* about three miles distant from Wilbrook, and on the 6th I was called to visit her. She complained of violent pain in the belly, chiefly at the umbilicus, and in the hypogastric region, with tenesmus, and frequent bloody stools: there was, however, no fulness nor tenderness of the abdomen; the pulse was 100, full and hard, and her tongue slightly furred. She had taken castor oil on the 4th, and repeated it on the 5th, both of which doses operated freely, without relief; on the contrary she experienced a great increase of suffering after the second dose.

She was blooded on the 6th, 7th, and 8th. Calomel was largely exhibited, guarded with a sufficient quantity of opium, to prevent its passing off by the bowels. The mercurial plan was laid aside on the 10th, and in its room were substituted draughts, containing ten drops of the balsam of Copaiba, every second hour, interposing occasionally, as the bowels required, a solution of Epsom salts in infusion of cascarrilla.

\* Rathmines is the outlet of Dublin, most celebrated for the purity of its air and dryness of its situation, and hence patients labouring under diseases of the lungs are generally sent thither.

Suppositories of opium were used, and the spirit of nitrous æther in almond milk, to relieve strangury, which had become very distressing.

Finding that the disease was not checked by these means, sulphate of zinc was exhibited in pills, each containing a grain, one of which was taken every hour, and a second blister applied to the abdomen. All these means, however, proved insufficient to check the progress of the disease, which daily increased in violence, and terminated in her death on the 17th of October.

It may be well to remark, that on the 13th and 14th, an apparent mitigation of symptoms took place; the discharges became more natural; the pain and tenesmus less distressing; the tongue began to clean, and the pulse became less frequent. At this period the mercury seemed to be taking effect, as her gums appeared spongy, and she complained of some uneasiness in her teeth—the affection of her mouth subsided the following day and the disease resumed its progress.

*Dissection.* The liver was perfectly healthy; the gall bladder contained some light coloured bile. The stomach was a good deal distended, and contained some dark brown fluid. The small intestines were more vascular than usual, but their structure did not otherwise appear to be changed. The mucous membrane of the large intestines, throughout its whole extent was thickened and uneven; its sur-

face was irregular and warty, and presented a mottled appearance. The thickening and induration increased as we approached the rectum, at which part lymph had been thrown out on the inner surface of the intestines; but in no part was there any trace of ulceration. The rectum was so much thickened, that when cut across it did not collapse, but remained open like the mouth of an artery.

Mrs J. (No. 3.) was attacked with symptoms of dysentery on the 6th of October. The mercurial plan was steadily pursued in her case; in addition to calomel and opium, mercurial ointment was rubbed in night and morning; and the soreness of the mouth was kept up throughout her illness; which, however, did not completely subside until some time after her removal from Rathmines to the country.

The tenesmus, which was very obstinate and distressing, was relieved by anodyne draughts, opiate clysters, and the frequent application of leeches to the anus, which always produced a temporary relief. The bowels were kept open by a solution of Epsom salts in infusion of cascarilla.

On the 10th of October the servant (No. 4.) of Mrs. B. the lady to whose house the J. family had removed, was attacked with bloody stools and tenesmus, unaccompanied by fever, and was relieved in a few days by the use of the crystals of tartar.



On the 12th Miss B. (No. 5.) who was unremitting in her attendance on Miss M. J. was seized with symptoms of dysentery, which yielded to a similar plan of treatment.

On the 17th Mrs. J.'s servant (No. 6.) had a similar attack, which continued three days.

All these attacks were without any fever accompanying them. On the 24th, however, Mrs. B. (No. 7.) was herself attacked, and the fever was so considerable that she was unable to leave her bed for nine days.

Captain J.'s house at Wilbrook lies very low. At the end of the lawn is a river, which is at least ten feet above the level of their parlours, and the adjoining ground is swampy.

It is remarkable, that though dysentery was prevalent in different parts of Dublin, it was not known at Rathmines beyond Mrs. B.'s house ; nor could I discover a single case in the neighbourhood of Wilbrook, though every possible enquiry was made.

Mrs. J. attributed the illness of her daughters to a damp and uncomfortable bed which they got on their journey up to Dublin.

Captain J. the only individual who escaped, came to lodge in Dublin when his family left Wilbrook,

and was not allowed ~~to~~ allowed to visit them at Rathmines."

In the month of August 1821 cholera was very prevalent in Dublin ; in the 28th of August I saw either four or five persons, who were attacked on the preceding night with cholera. In the end of September there were many severe cases of dysentery in the hospitals, some of which commenced with symptoms of cholera. I also saw several cases of dysentery in private practice, two of which were from Limerick. When these patients came to Dublin their dysentery was in the chronic form ; both were apparently cured by pushing mercury to the point of slight salivation.

In Limerick dysentery began to prevail in the latter end of May, or beginning of June ; and although no class of the inhabitants altogether escaped from its attacks, it was most general and severe among the lower orders, especially those who dwell in that part of the city called Irish town, particularly in Palmer's town, in Margaret's-street, and the surrounding lanes. When it first appeared the mortality was considerable, and it proved fatal even to the young and robust, who neglected its first symptoms. By the kindness of Dr. Renny I am enabled to lay before the reader an excellent account of the disease as it appeared in the 79th regiment, which was drawn up by Dr. Perston, the Assistant Surgeon to that distinguished corps.

ANSWERS TO QUERIES TRANSMITTED FROM THE ARMY  
MEDICAL OFFICE, 28TH SEPTEMBER 1821.

BY D. FERSTON, M. D. ASSISTANT SURGEON TO THE 79TH REGT.

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No. 1. An account of the condition and previous health of the regiment ?

The condition and previous health of the regiment was good, no serious disease having occurred during the preceding month, with the exception of three cases of continued fever, and two of pneumonia.

No. 2. How accommodated in Limerick ? State of quarters and barracks ?

The whole of the regiment is stationed in the new barracks, except a detachment of thirty-eight men, quartered in the Castle barracks. The situation of the new barracks is elevated, and, I think, may be considered healthy. The chief objections to that building are the want of windows in the rear, by which thorough ventilation is prevented ; and the want of kitchens, whereby the men are forced to cook all their food in the rooms where they sleep. The immediate contiguity of the soldiers privy is a source of almost insufferable nuisance in some of the rooms, during hot weather.

**No. 3. General health of the inhabitants of Limerick ?**

Dysentery was very prevalent among the inhabitants of Limerick during the summer months, attacking all classes ; but the poor, who lived in the confined, narrow, filthy lanes and streets, were the chief sufferers, and numbers died. It was not equally prevalent in all parts of the town, at the same period, but seemed to move from one district to another. I am informed that some cases appeared so early as the month of November last ; these are said to have originated in the neighbourhood of the large slaughter houses, after an immensity of offal had been thrown out, and exposed to the action of the atmosphere. I understand the disease has disappeared, or nearly so, and that the inhabitants are now generally healthy.

**No. 4. An account of the rise, progress, and probable causes of dysentery in the 79th regiment ?**

The first case of dysentery in the regiment was reported on the 15th of June last, in which month twenty-three men were admitted into hospital labouring under that disease. In the following month the number admitted was fifteen ; in the month of August six, and in September only three. Of these five were relapses. No case has been reported since the 8th ultimo. It will be seen from the Table that the disease made its greatest advances during the first fifteen days, and that from the commence-

ment of July the number of cases gradually diminished.

With regard to the causes, which acted in producing the disease in question, nothing certain, I believe, has been assigned. The most probable, I am inclined to think, was the intense prevailing heat of the days, and the cold and profuse dews of the nights, at the time it first shewed itself; together with some unknown peculiarity of the atmosphere. Several of the men were seized with the disease while on guard, during the night, in the neighbourhood of the gaol, where there is generally a great accumulation of all kinds of dirt and filth. Other sources of the disease might be regarded in the noxious exhalations arising from the filth collected in the confined narrow streets; in the effluvia from the banks of the Shannon, the stream having receded considerably during the long continued drought; and to these may be added the too liberal use of pernicious spirituous liquors; for those addicted to irregularities were remarked to be the principal sufferers, though in several instances this could not be imputed. The disease had decidedly nothing contagious its character.

No. 5. Medical history of the disease, and method of treatment?

In this complaint the patients were first seized with a sense of uneasiness, or wandering pains in the bowels, quickly followed by severe griping and tender-

ness over the abdomen, particularly in the lower part, with frequent scanty evacuations of slimy feces, intermixed with mucus and blood; tenesmus; feverish heat, with frequent, generally hard or sharp, pulse; thirst, and in some cases nausea and vomiting of greenish bilious fluid. As the disease advanced strangury came on, with increased inflammatory tenderness and tension; acute pain was generally experienced in the course of the colon, particularly in its ascending portion, and great suffering from excoriation, and sensibility in the anus and rectum. In all the fatal cases (though this was by no means always a fatal symptom) the evacuations became similar to the washings of bloody meat; these were very frequent and very fetid, and attended with much and protracted straining; extreme prostration of strength, and emaciation took place. At last the evacuations were voided unconsciously; hiccup, with frequent vomiting of dark green fluid followed, the alvine discharges being tinged with the same fluid; the extremities gradually became cold. In this state the unfortunate patient perhaps lived two or three days, then death put an end to his sufferings, his mental faculties being perfect throughout.

In the course of the disease there was great extrication of air in the bowels, inducing much uneasiness; and in several cases, in the advanced stages, a great variety in the appearance and consistence of the evacuations was observed in the space of a few hours, one consisting almost wholly of natural feces, the next being similar to beef washings, and a third

containing slimy, mucous, and bloody fluid, &c. In some instances, even of those which terminated fatally, the patient endured little acute suffering throughout the disease.

In conducting the treatment, the most active and decided measures were immediately adopted to subdue the inflammatory action ; from thirty to forty, or more, ounces of blood were instantly taken from the arm ; hot fomentations were applied to the abdomen, or the patient was put into a warm bath, and a solution of salts and tartar emetic directed to be given in small doses every hour, which generally produced discharges from the stomach as well as the bowels ; these were generally attended with a favourable result : the griping pain and tenderness were overcome ; the blood ceased to appear in the stools ; a dose of the compound powder of ipecacuanha, aided by the warm bath, or fomentations, usually produced moisture over the body ; and the patient perhaps felt permanently relieved ; too frequently, however, this relief was only temporary, and all the unfavourable symptoms recurred with as much violence as before. General bleeding was again employed, and repeated as the urgency of the symptoms seemed to demand. Small doses of neutral salts were administered, together with fomentations. Emollient injections and local bleeding and blistering were had recourse to ; the blood drawn invariably shewed the inflammatory covering.— These means in most of the cases checked the violent action of the arterial system, and removed the

local pains ; but notwithstanding the most pointed attention to the state of the bowels, the restriction of nourishment to fluids, thin flummery, and other simple substances ; the disease in a majority of cases repeatedly returned, and the strength of the patients having become greatly exhausted from the previous treatment, general bleeding could no longer be put in practice. Leeches were therefore the chief substitute, assisted by fomentations, blisters and emollient glysters. In the course of a protracted disease, the medicines were, of consequence, varied to meet existing circumstances : Dover's powder ; small does of calomel and ipecacuanha ; of rhubarb and calomel ; of calomel and opium, &c. &c. but the most successful in the chronic form of the complaint was a combination of the blue pill, tartar emetic and opium ; at the same time exhibiting tonics, such as the infusion of quassia, colombo, &c. The latter was also given during convalescence. The purgatives in most frequent use were the sulphate of magnesia and castor oil. Draughts containing carminatives combined with magnesia and rhubarb were attended with advantage, when flatus had collected in the bowels. In all the severe forms of the disease, after premising general evacuations, and when the inflammation was checked, mercurial frictions were ordered over the region of the liver. I was led to try the effects of this remedy, in consequence of having witnessed that the structure of that viscus was more or less destroyed in every fatal case of this disease, though it had been specially remarked, that no feeling of



pain—not even a sense of weight or uneasiness had been referred to that organ by the patients (but this will be more particularly noticed when I come to state the appearances on dissection); but the advantages accruing from this plan were not so extensively beneficial as I had anticipated, though in several instances I had reason to attribute the patient's recovery to the action of this medicine. Astringents and absorbents in conjunction with aromatics and cordials were indicated in severe cases, with starch glysters and opium.

All the patients who had laboured under this disease, previous to their being discharged from Hospital, were provided with two flannel waistcoats, and excused night duties till their strength was perfectly restored.

#### No. 6. The appearances on dissection ?

The diseased appearances discovered on inspection of the bodies was very much alike in all. The chief seat of disease was in the colon, the coats of which were found greatly thickened, with strong marks of inflammation—portions of the gut, in some cases, approached a scirrhus state; the passage at this part being much narrowed. Part of the ascending colon generally adhered to the peritoneum, and there the disease had made greatest progress—it felt thickened, and was dark coloured. The rectum was also in general thickened, and its inner coat much destroyed by ulceration. The

small intestines were more or less occupied with red vessels, and parts exhibited a dark livid appearance. In one instance the omentum was firmly attached to the peritoneum, nearly in its whole extent, and in some parts pus had formed between the two membranes.

The mesenteric glands in some were greatly enlarged, and converted into a firm cheesy looking substance.

The stomach was always found about half-full of dark green fluid, and fully distended with flatus; the coats seemed healthy.

The liver was invariably deeply engaged in disease; in general considerably enlarged; and its whole structure apparently destroyed. In two cases the surface was studded with large yellowish white spots, which on cutting into them were found to contain pus, and yellow purulent matter was found in distinct cells throughout its whole extent. The concave surface commonly presented a livid aspect, and was indurated. The gall bladder usually nearly empty.

*Limerick, Oct. 3, 1821.*

*Table showing the Dates of Admissions, Discharges, and Deaths from Dysentery, in the 79th Regiment, from the 15th June to the 1st Oct, 1821, inclusive,*

Dates.		Admissions.	Discharges.	Deaths.	Convalescents in Hospital.
1821.					
June	15	2	0	0	
	16	2	0	0	
	17	3	0	0	
	18	3	0	0	
	19	1	1	0	
	20	2	0	0	
	21	1	0	0	
	22	4	1	1	
	23	1	1	0	
	25	1	1	0	
	27	1	1	1	
	28	1	1	0	
	29	1	3	1	
July	1	1	3	0	
	3	1	0	0	
	4	1	0	0	
	5	2	0	0	
	8	1	0	0	
	9	0	2	0	
	10	0	2	0	
	14	1	0	0	
	16	1	0	0	
	17	0	1	0	
	19	0	1	0	
	22	1	0	0	
	23	0	0	1	
	27	1	0	0	
Aug.	28	2	0	0	
	29	1	0	0	
	30	0	0	1	
	31	1	1	0	
	1	1	1	1	
	2	0	1	0	
	3	0	3	0	
	5	1	0	0	
	7	0	1	0	
	8	1	1	0	
	9	1	0	0	
	10	1	0	0	
	11	0	2	0	
	12	1	0	0	
Sept.	20	0	0	1	
	21	0	1	0	
	25	0	0	1	
	1	1	0	0	
	3	1	0	1	
	4	0	1	0	
	7	1	0	0	
	8	1	0	0	
	10	0	1	0	
	11	0	2	0	
	17	0	1	1	
	24	0	0	0	
Total		47	34	10	3

**A REPORT**  
**OF**  
***CASES OF ANEURISM,***  
**IN WHICH**  
**OPERATIONS WERE PERFORMED,**  
**IN THE**  
**RICHMOND SURGICAL HOSPITAL, DUBLIN.**  
**BY CHARLES H. TODD,**  
**ONE OF THE SENIOR SURGEONS TO THAT ESTABLISHMENT, AND ONE**  
**OF THE PROFESSORS OF ANATOMY AND SURGERY TO THE**  
**ROYAL COLLEGE OF SURGEONS IN IRELAND.**

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**ALTHOUGH** the cases of aneurism, detailed in the following Report, may appear to those Surgeons, whose extensive practice and connexion with Hospitals afford them frequent opportunities of observing the varieties of that disease, to possess but little novelty, yet I trust they will be perused with some degree of interest by less experienced practitioners, for whom this work is chiefly intended:

The operation on the external iliac artery is an acquisition to surgery of so recent a date, and of such importance, that it becomes the duty of every Hospital Surgeon to record the result of his experience in those instances, in which he may have been called on to perform it, and thus to enable the profession to estimate the value of the operation, and to appreciate the genius of that eminent Surgeon, to whom we are indebted not only for the introduction of an operation, which a few years ago would have been considered absurd or chimerical, but for all the improvements in this department of surgery, which have resulted from its success.

On a perusal of these cases it will be observed, that I adopted the mode of operating described by Sir Astley Cooper, in preference to that recommended by Mr. Abernethy. The opinions of the most experienced Surgeons in this city are divided with regard to the comparative merits of these operations; the difference between them consists chiefly in the direction of the incisions; however, after repeated trials of both on the dead subject, I was led to conclude, that Sir Astley Cooper's method afforded the operator a greater facility of applying the ligature to the artery, more room being obtained by it, and with less disturbance of the peritoneum, than by the other mode; and that if it became necessary, as in case No. 2, to apply a ligature to an higher part of the artery, Mr. Abernethy's operation might be then adopted, and with much less pain and risk to the

patient, than if that operation had been first performed, and unavoidably repeated.

Although the cases Nos. 1 and 2 terminated fatally, yet this result was by no means attributable to the operation in either case ; on the contrary, none of these dangerous and alarming affections occurred, which are usually apprehended from similar operations : neither patients exhibited the slightest tendency to peritoneal inflammation, and in both the collateral circulation was quickly and effectually established. Even in case No. 2, in which secondary hæmorrhage rendered a repetition of the operation indispensable, no unpleasant symptoms arose directly from it ; and the dissection proved that, had the operation been performed under more favourable circumstances, its effects would, in all probability, have been highly satisfactory.

The cases of popliteal aneurism are related chiefly with a view of recommending a more general adoption, than is at present practiced, of a preparatory course, previously to operation. I can scarcely doubt but that in many cases of aneurism, in which operations have failed, from mortification of the limbs succeeding, the patient might have been saved by a delay sufficient to allow some progress to be made in establishing the collateral circulation ; and I feel confident that this desirable object may be promoted in most instances of recent disease, situated at a sufficient distance from the trunk, by compressing the principal artery of the limb for a few hours every

day, for a period which must vary according to the circumstances of the case.

I am aware of the difficulty of persuading patients to submit to the privations and restraint which constitute the chief part of a preparatory course ; and that under such circumstances surgeons may be compelled either to relinquish their patients altogether, or proceed to operation prematurely ; these obstacles, however, are not to be brought forward as arguments against a rational practice, nor are we to be deterred by the prospect of their occurrence from urging the expediency of that practice, and of using all the influence we possess to carry it into execution.

It may be further stated in favour of this preparatory treatment, that a sufficient number of instances of spontaneous cure of aneurism are recorded, to prove to us, that such events are by no means improbable, and as it is well known that nature is to be assisted in these her salutary efforts by rest, abstinence, depletion, by diminishing the quantity and impetus of the blood in the aneurismal artery by mechanical contrivances ; in fact, by the same means which, if employed at a proper period, and with sufficient perseverance, will contribute to the safety and success of the operation, an additional inducement is held out to us to give those measures a fair trial.

In pursuing a plan of treatment of this kind, the

circumstances to be principally attended to by the surgeon are, the progress of the local affection, and the effects of the general remedies employed on the constitution of the patient. In some instances, notwithstanding every effort to diminish the force of the circulating powers, an aneurism will increase rapidly;—a case of this kind will not admit of much delay, and the operation must be resorted to before the tumour has acquired such magnitude as to endanger the soundness of its integuments ; and it is scarcely necessary to add, that the health of the patient appearing to suffer materially either from local pain, which is sometimes very acute, or from the lowering treatment, must be taken as an indication of the expediency of a speedy operation.

Case No. 3, excited more than ordinary interest amongst those who with me observed its progress. We had but little hesitation in ascribing the alarming symptoms which set in on the fourth or fifth day after the operation to inflammation of the lining membrane of the artery extending to the heart, and it was satisfactory to find that the plan of treatment suggested by this view of the case was, from the commencement, productive of the best effects.

Case No 4, in which the operation was performed on the same day with the former, is a remarkable contrast to it, from the total absence of, even as much symptomatic fever as might be expected to arise from a simple wound of the thigh, independently of the ligature of the artery, and of its



effect on the circulation of the limb—in this point of view alone the case appears worthy of being recorded.

The case of aneurism in the forearm was urgent ; the increase of the tumor had been for several days rapid, the pulsation was strong, and the pain excruciating ; under these circumstances, and reflecting on the extent and situation of the tumour, and on the nature of the circulation in the arm, amputation appeared at first to be the only resource ; this, however, would have deprived the patient of the means of subsistence, and have rendered her a burden to her family. I therefore determined on tying the brachial artery in the first instance, and the result exceeded my expectations, for although the tumor still exists, with but little diminution, it is quite free from pain and pulsation, and the limb is useful.

### CASE, No. 1.

Jane White, the daughter of a farmer, aged 22 years, of a robust habit, florid and healthy complexion, was brought from the country, and admitted into one of my wards in the Richmond Surgical Hospital, on the 26th of May, 1819.

She had a large oblong tumour on the superior and anterior part of the thigh, close to Poupert's ligament, beyond the plane of which it projected considerably, and ascended so much that the liga-

ment was arched across the upper part of the swelling. Fluctuation was very evident, although the tumor was tense, but no pulsation could be felt, and the skin covering its most prominent point was a little discoloured.

On the inner side of this tumor, and extending to the left labium a smaller tumor existed, between which and the large one there appeared to be a direct communication at their bases, although a depression of the skin divided them on the surface; this tumor was also tense, with fluctuation; but its integument was healthy. The thigh, leg and foot were slightly œdematous; the patient complained of pain on the inside of the knee, and of some numbness of the entire limb—her pulse was perfectly regular; she had no palpitation of the heart or oppression of the chest, and her general health was in every respect unimpaired. Pressure upon the external iliac artery did not affect the size or tension of the tumors; neither were they perceptibly diminished by pressure directly applied to them. No pulsation could be discovered in the course of any of the large arteries below the tumor, although the temperature of the limb corresponded exactly with that of the other.

The patient gave the following account of the origin and progress of this affection:

About four or five months before her admission into Hospital, she occasionally felt shooting pains in

the groin ; at first these were momentary, and being ascribed to fatigue, no importance was attached to them ; becoming, however, more acute, and recurring more frequently, she was induced to feel the part affected with her hand, when she discovered a hard and moveable tumor, not larger than an almond. She denied the existence of pulsation in the tumor at this or any subsequent period, but admitted that when it was very painful, which was frequently the case after unusual labour or exercise, she felt throbbing, such as she had often experienced in a common boil or whitlow ; this sensation, however, was always of short duration.

The tumor continued almost stationary for more than a month, from which period it gradually increased, the pain becoming more severe, and particularly so when she coughed, sneezed, or suddenly exerted herself. From her childhood her life was active and laborious, and her health uninterrupted ; she could not ascribe her disease to injury or accident of any kind ; she has had no rigors—and her appetite, strength and rest have sustained no diminution.

May 28th. Having this day consulted with my colleagues on this important case, I proceeded, with their concurrence, to make an oblique puncture into the tumor with a very small lancet. On withdrawing the lancet, dark coloured fluid blood flowed from the wound in a gentle but continued stream—a director was introduced, along the groove of which

the blood flowed more rapidly, carrying with it small coagula, and particles of colourless fibrine; the wound was then closed with adhesive plaster, and it united by the first intention.

June 1st. The tumor has increased, is more painful, and the fluctuation is more evident. Its appearance so closely resembled that of an abscess, that I was prevailed on by a gentleman who had not seen the case before, to make another puncture: the result, however, was the same as on the former occasion.

June 2nd. The tumor continues to increase; is much more painful and tender than hitherto. Symptomatic fever, very high. Pulse 112. Tongue white. The patient complains of thirst and restlessness.

#### MEASUREMENT OF THE LIMB AND TUMOR.

	Inches.
Circumference of the diseased thigh, including the tumor at its most prominent part	- 19½
Circumference of the corresponding part of the sound limb	- 16
Circumference of the large tumor at its basis as nearly as it could be taken	- 18
Perpendicular extent	- 5½

In consultation this day it was admitted, that tying the external iliac artery afforded the patient the

only prospect of relief. The following day was therefore appointed for the operation. In the mean time the usual remedies to allay fever and pain were resorted to.

Thursday, June 3d. One o'clock.—I tied the external iliac artery, having conducted the several stages of the operation as recommended by Sir Astley Cooper, the fascia connecting the iliac artery and vein was more dense than I expected to find it, although the extent of the tumor at the upper part compelled me to apply the ligature on the artery as high as possible.

On the ligature being tightened, the patient did not complain of any particular sensation in the limb, neither was any perceptible alteration produced in the tumor.

In two hours after the operation the temperature of both limbs was the same (viz. 78°).

7 o'clock The temperature of the left foot (the limb operated on) was 74°, of the right 80°. The patient complains of increased numbness down the thigh and leg. Pulse 100; skin hot and dry; with a white tongue, and much thirst.

9 o'clock. No alteration in the symptoms.

*Mittatur sanguis ad ℥xii.*

*Capiat Haust. Effervesc. 2dis horis.*

11 o'clock. The temperature of the left foot 98°. of the right 96°. Pulse 92. Feverish heat and thirst diminished ; the patient disposed to sleep.

June 4th. 6 o'clock, A. M. Had some refreshing sleep, but complains of nausea and languor ; bowels confined ; pulse 108.

Temperature of left foot	-	82°
of right	-	96°

*Capiat. Mist. Salin. Aperient. M. S. ad effectum.*

12 o'clock. Hitherto the temperature of the limbs was taken by introducing the bulb of the thermometer between the toes, but on applying it to the inside of each leg, a little above the ankles, the temperature of the left leg was 96°.

right 98°

7 o'clock, P. M. Left leg 96° Left foot 90°  
Right do 98° Right do. 98°  
Pulse 112.

9 o'clock. Aperient mixture had no effect ; she continues to complain of nausea, but has no fullness or pain of the abdomen, nor tenderness on pressure near the wound.

*Injiciatur Enema commune statim.*

12 o'clock. Has vomited a little ; her counte-

nance is expressive of sickness and anxiety; pulse 120 and hard. The enema has been retained.

*Rep. Enema. Venesection ad 3xii.*

*R. Subm. Hydr. gran. iv.*

*Opii gr. iss.*

*M. divide in pil. tres. Capiat unam 4tis horis.*

June 5th. *Contr. Haust. Effervescentes.*

7 o'clock, A. M. Bowels well opened; nausea considerably diminished; has drank freely of lemonade and whey; has had a little sleep. Pulse 106. Tongue cleaner.

Temperature of left leg	-	104°
of right	-	102°

7 o'clock P. M. Again complains of sickness, although the bowels are free; has had sound sleep during the day; no pain in the abdomen or tumor; one of the punctures a little uneasy; the bandage covering it slightly stained with a bloody discharge. Pulse 106.

Temperat. of left leg	108°	left foot	104°
of right do.	106°	right do.	108°

June 6th, 7 o'clock, A. M. Has vomited a great deal of green bile during the night, since which the nausea has in a great degree subsided—has slept soundly since 5 o'clock. Pulse 104.

Temperat. of left leg	94°	left foot	84°
of right do.	92°	right do.	92°

1 o'clock, P. M. The bandages and dressings were removed from the tumor. The integuments had ulcerated for about an inch in diameter in the situation of one of the punctures, and a plug of coagulated fibrine projected through the circular aperture. The tumor was considerably diminished at its upper and internal part. Pulse 112.

8 o'clock. Tumor again dressed. Plug of lymph larger and more prominent. Pulse 112 with much hardness.

*Venesection ad 3x.*

11 o'clock. Feels altogether more comfortable than she has done since the operation.

June 7th. 2 o'clock, A. M. Some hæmorrhage from the tumor, which was suppressed by moderate pressure with the hand for a few minutes. Complains of great uneasiness and weakness.

*Capiat. Statim Haustum cum Tinct. Opii, gtis.*  
xxv.

8 o'clock. Has slept well for four hours and continues tranquil.

1 o'clock, P. M. The dressings changed, large



coagula have come away ; no hæmorrhage ; pulse 116 ; bowels confined.

*Capt. Mist. Sal. Aperient m. s.*

9 o'clock. Has slept comfortably for some hours, and is free from pain and uneasiness.

June 8th. 8 o'clock, A. M. Had a good night and is free from pain ; discharge from the tumor very considerable and offensive. Several large pieces of coagula in a putrid state removed.

12 o'clock. The discharge is so profuse as to render it necessary to change the dressings again. The coagula come away freely, and vary in appearance ; some resemble putrid blood ; others are of a yellow colour, and in consistence are soft, pulpy or gelatinous.

The dressings were removed from the incision of the abdomen ; the edges of the wound had united in some points, suppuration healthy and moderate in quantity.

Temperat. of left foot	92°	left leg	94°
of right do.	92°	right do.	92°

Pulse 110. The aperient mixture has not had the desired effect, but has produced nausea.

*Omit. Mistura*

*Inj. Enema Com. statim.*

8 o'clock, P. M. The enema has had no effect ; she complains of much sickness and lassitude ; countenance pale, with hectic patch on each cheek. Skin very hot ; pulse 116 ; a considerable quantity of bloody serum was discharged from the tumor. The dressings being removed, some loose coagula were taken out ; the discharge profuse and fetid. The cavity of the tumor appeared now almost empty ; its orifice greatly enlarged, and its internal surface dark coloured and very irregular. Some dossils of lint were introduced to absorb the discharge, and moderate pressure was applied by means of adhesive straps and a flannel roller.

June 9th. 7 o'clock, A. M. Slept pretty well ; countenance less expressive of languor and anxiety ; bowels free ; pulse 120 ; a dark and fetid discharge has stained the roller.

12 o'clock. Dressings removed ; the discharge thin and offensive ; complains of great weakness, but no pain ; the part operated on also dressed ; the granulations and discharge healthy.

*Chicken broth.*

11 o'clock, P. M. She is now asleep, and has been very tranquil during the evening ; skin very hot ; hectic cheeks ; pulse 130.

June 10th. 3 o'clock, A. M. Complains of a severe burning pain in the diseased cavity ; some ap-

pearance of fluid blood on the roller ; is very weak and inclined to vomit ; pulæ 140.

*Haust. Efferves, cum Tincturæ Opii gttis. x. alternis horis.*

7 o'clock, A. M. She took two draughts, and had some refreshing sleep.

12 o'clock. Dressings removed ; several large putrid coagula have come away ; debility very great ; the emaciation very considerable during the last two or three days. She has expressed a wish for some wine and water, which was ordered.

11 o'clock, P. M. The discharge from the diseased parts highly offensive ; she thinks the fetor is in a great degree the cause of her sickness. She has no pain. Dossils of lint wet in nitrous acid lotion, were introduced into the cavity ; and the bandages were moistened with camphorated spirit of wine.

June, 11th. 12 o'clock. She slept well during the night, and feels easy to-day. The discharge diminished and the fetor greatly lessened ; the parts were dressed as yesterday. She was allowed some sheep's trotters for dinner.

9 o'clock, P. M. The dressings again removed. several large masses of coagula discharged, by which the bulk of the tumor was greatly diminished ; it was

now found necessary to give more support to the parts by increased pressure.

June 12th. 7 o'clock, A. M. Has passed a very restless night, although she has had no pain or hæmorrhage, and the discharge is much diminished; her countenance is remarkably pale and sallow, and she complains of great nausea. She is disgusted with her wine, and has no inclination for food or drink.

*R. Confect. Aromat.* 3ii.

*Aq. Cinnamon.*

— *puræ aa.* 3iii.

*Tinct. Opii* 3i.

*Sacchar. Alb.* 3i.

*M. capt. cochi* i. *amplum omni hora.*

12 o'clock. The diseased parts were dressed with dossils of dry lint, and the limb supported with the adhesive straps and roller; the incision on the abdomen healing; nausea returned; wishes for a little white wine.

11 o'clock, P. M. Has taken four ounces of white wine, much diluted, in the course of the day. Pulse 120; tongue clean; no thirst, or uncomfortable heat; feels tranquil and inclined to sleep; the limb easy.

June 13th, 1 o'clock, P. M. She slept a good deal at intervals, during last night and this morn-

ing, but still complains of increasing weakness and of nausea. Her skin has assumed a light yellow hue ; she has no desire for food ; tongue pretty clean.

Scarcely any discharge from the tumor ; the surface of the cavity is dark coloured and dry ; it was dressed with olive oil 2 parts ; oil of turpentine 1 part.

11 o'clock, P. M. Took a bit of chicken, and some broth at three o'clock ; sickness of stomach much less ; debility very great. No discharge from the diseased cavity. Turpentine dressings renewed ; they produced much pain, which having shortly subsided, she fell asleep.

June 15th. 12 o'clock. Slept tolerably well, and feels refreshed ; nausea greatly diminished ; she took a pint of arrow root jelly, seasoned with wine, during the forenoon, which has not disagreed with her ; bowels free ; pulse 116. Scarcely any discharge from the tumor.

The Peruvian balsam was substituted in the dressings for the oil of turpentine ; this application produced much pain.

9 o'clock, P. M. Very languid and restless ; black putrid fluid discharged from the tumor in great quantity ; complains of much pain and heat in

the interior of the cavity. The parts were dressed with dry lint, and a bread and milk poultice applied.

*Haust. Anod. statim.*

June 16th. 12 o'clock. Countenance very much sunk ; sallow, and occasionally flushed ; she has no desire for food ; does not complain of sickness, but feels much fatigued, having had no sleep during the night ; pulse 124 ; bowels sufficiently free ; has an acute pain in the external ankle of the left leg, without swelling or external inflammation ; no pain in the tumor ; discharge considerable, and offensive.

*Dressed as yesterday.*

9 o'clock, P. M. Weakness and restlessness much increased ; pain of the ankle very acute ; still no external inflammation, or swelling of the part ; discharge from the tumor exceedingly fetid.

*Admov. Catap. Effervescens.*

*Capiat Haustum Anod. cum Træ. Opii guttis.*

xxx.

June 17th. 7 o'clock, A. M. Suffered excruciating torture until the effervescing poultice was removed, and an emolient one substituted ; the opiate, although repeated at the expiration of two hours, had no effect. Complains of most acute pain in the

calf of the leg and ankle; frequent vomiting and retching; pulse 130; very languid; some difficulty in breathing. From this hour the progress of unfavourable symptoms was very rapid, and could not be retarded by any of the remedies employed. She continued to suffer great pain, and to labour under the most distressing anxiety, until 10 o'clock at night, when she expired.

*Dissection.* The tumor was laid open to its fullest extent, and its putrid contents having been washed out, the internal surface presented a very irregular appearance; no trace of a distinct sac could be observed. The small branches of nerves, which seemed to have resisted the putriferactive effects of the contents of the tumor, were completely insulated, and extended through the cavity unaccompanied by veins or arteries. The muscles, except where they formed the walls of the cavity, were healthy, but somewhat paler than natural. Rather more than three inches of the femoral artery was wholly destroyed; the upper extremity of it was found in a contracted state, immediately below Poupart's ligament. The lower part of the artery contained a coagulum, which filled its cavity for several inches; the outer surface of this coagulum was very firm, of the colour of fibrine, and in close apposition with the internal surface of the artery; the red globules and more liquid parts of the clot were contained within this fibrous layer, which gave the coagulum a tubular appearance. The anterior part of the crural vein, immediately below the liga-

ment, and where it lies parallel to the artery, was destroyed for more than an inch, and thus opened into the cavity of the tumor.

The external iliac artery contained a firm clot, which extended from the point at which the ligature was applied to the orifice of the internal iliac. This clot adhered very closely to the internal coat of the artery, and when torn from it, the latter appeared vascular and villous.

The ligature was quite detached, and had every appearance of having been so for some days.

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### CASE No. 2.

November 14th, 1820. John Lawson, æt. 28, by trade a printer, was admitted this day into the Richmond Surgical Hospital. His countenance is pale and sallow; his stature is low; his limbs small, and he appears to possess a weak and delicate constitution. Immediately below Poupart's ligament, on the left thigh, there is an aneurism of the femoral artery; the tumor is as large as a swan's egg; it pulsates strongly; pressure above the tumor suspends the pulsation, and the swelling almost entirely subsides; the integuments are healthy; about two inches below this, and in the line of the femoral artery, there is another tumor of great magnitude, and



of a globular figure ; it extends to the internal condyle of the femur ; has a tense firm feel, with an obscure fluctuation ; the integuments are of a dusky yellow colour, and are traversed by three or four enlarged veins.

While the patient remains in an horizontal posture, both tumors are free from pain ; but considerable uneasiness, and a sense of increased heat, are produced by much motion of the limb.

Between six and seven months ago, while employed at his trade, he received a severe blow in his left groin, from the handle of the printing press. In a fortnight after this injury, he perceived a small pulsating tumor in the part which has gradually increased to its present size. In four months from the appearance of the upper swelling the lower one commenced ; the increase of the latter has been very rapid ; its pulsation, although not so strong as in the upper tumor, was quite distinct until within the last three weeks, during which it has entirely ceased, and the tumor has become remarkably hard and tense. There is some numbness of the leg and foot, but no oedema, except after exercise. In the year 1814 he had an ulcer on his penis, for which he was salivated in one of the London Hospitals ; and although his habits have been the reverse of temperate or regular, he has since enjoyed good health.

Having travelled yesterday and last night in the

mail coach from Waterford, a distance of seventy-six miles, he feels much fatigued, and complains of feverish heat, thirst, and restlessness; pulse 90, and regular; tongue white and dry.

*Capiat Haustum Efferves. 2dis. horis, et Haust. Anod. hora somni.*

November 15th. Is much refreshed by a great deal of tranquil sleep; bowels confined.

*Capiat Infusi rosæ Cathart. unciam tertia qq. hora ad effectum.*

December 1st. Since Lawson's admission into the Hospital, his general health is improved; for several days he laboured under great agitation; and as the disease did not appear to make progress, the treatment consisted merely of quietness, a light regimen, an occasional dose of the aperient solution, and an anodyne at night, when necessary. Having been for some days free from much constitutional disturbance, it was now deemed advisable to urge the expediency of an operation; to this measure our patient assented without hesitation.

December 4th. 1 o'clock. I performed the operation of tying the external iliac artery, as in the former case; the ligature was applied with great facility; on the knot being tied, the pulsation in the inguinal tumor immediately ceased, and it became flaccid; the lower tumor remained unaltered.

4 o'clock, P. M. Complains of pain in the wound; the tumors and limb are free from any uneasy sensation; pulse 96.

Temperature of aneurismal limb	} 92°
between the toes	
_____ of sound limb	94°

8 o'clock, P. M. Pain in the wound diminished; is a little restless.

*Capiat. Haustum Anod. h. s.*

December 5th. 8 o'clock, A. M. He rested well, and is free from pain at present; pulse 112.

Temperature of both limbs equal, viz. 96°.

4 o'clock, P. M. Continues easy; no tenderness of the abdomen, or nausea; complains of some thirst; temperature same as morning.

Pulse 120, with some hardness.

*Mitt. Sang. ad 3x. Haust. Efferves. 2dis. horis.*

December 6th. 8 o'clock, A. M. He is hot and feverish, and complains of pain about the wound, and some nausea; pulse 120; bowels confined.

*Rep. Missio Sanguinis ad 3x.*

*R. Misturæ Alkal. 3viii.*

*Tart. Sodæ et Kali 3vi. M.*

*Cap. Coch. ii. cum coch. i.*

*Succi limonis inter Efferves. 2dis. horis ad alvi solutionem.*

8 o'clock, P. M. His bowels have been freed, and he feels better.

December 7th. 8 o'clock, A. M. Still some tenderness near the wound ; pulse 112.

*Rep. Venesectio ad 3x.*

The inguinal tumor has acquired a solid feel, and pressure has now no effect in diminishing its bulk ; the lower tumor is smaller, and much softer than before the operation.

8 o'clock, P. M. Is easy, but not disposed to sleep.

*Capiat Haust. Anod.*

December 8th. 8 o'clock, A. M. Had a restless night ; complains of headach, and of some uneasiness in the lower part of the abdomen ; bowels confined ; pulse 108.

*Venesectio ad 3x.*

*Mist. Ros. Cathart. 3i. 2dis. horis ad effectum.*

December 9th. 8 o'clock, A. M. Bowels not yet freed ; complains of thirst and headach.

*Inj. Enema com., statim.*

8 o'clock, P. M. The enema produced copious evacuations ; the headach and thirst have subsided ; pulse 112. and hard.

*Venesectio ad 3viii.*

*℞ Pulver. Digital. Purp. gr. xii.*

*Cons. Ros. q. s.*

*M. ft. Pil. xii. Capiat. unam 4tis. horis.*

December 10th. He feels pretty well.

December 11th. Has every appearance of amendment ; pulse 90.

December 12th. Passed a restless night ; has a slight oppression of his chest ; his bowels are kept free by his taking two or three aperient pills, when necessary ; pulse 86 ; some thirst.

*Haust. Efferves. 2dis. horis.*

December 13th. His sleep last night was disturbed and uncomfortable, and he feels much oppression of his chest ; pulse 100 ; bowels regular.

*Venesectio ad 3x.*

December 14th. Feels much better to-day than since the operation ; the wound looks healthy ; both tumors are diminished ; pulse 86.

*Intermit. Pilulæ Digital.*

December 18th. Continues to improve.

December 25th. The ligature came away with the dressings ; the wound is healing, and the tumors are much diminished, and are free from pain ; the lower one has a soft elastic feel, and the fluctuation of its contents is very distinct. The patient's countenance is improved ; he feels stronger, and has a good appetite ; bowels regular ; no thirst ; pulse 80.

December 28th. While Mr. Benson, one of my pupils, was in the act of applying a roller to the foot, a profuse hæmorrhage suddenly took place at the wound ; the dressings, &c. were quickly removed, and the blood was observed to flow per saltum, and with considerable impetus. Mr. Benson immediately applied his finger to the part at which he felt the jet of blood, and having made pressure for some time, the bleeding ceased. The patient, aware of his danger, was much agitated by this unfortunate occurrence. A composing draught was administered ; the strictest quietness and attention en-

joined, and arrangements were made that two of the pupils should watch at his bed side ; the wound was left uncovered.

December 30th. He had no hæmorrhage until last night, when about six ounces of blood were lost. A piece of sponge was applied, and the bleeding ceased.

January 2d. Several ounces of blood were lost by a sudden hæmorrhage last night, but it was suppressed as before by moderate pressure.

His bowels are confined, and a circumscribed tumor, with pulsation, is indistinctly felt in the abdomen to the left side of the umbilicus ; the action of the heart and arteries much excited ; the pulse small.

*Inj. Enema com. quamprimum.*

January 8th. Has had no hæmorrhage since the 2d, and his appearance is improved. Enemata have been occasionally administered, and have brought off much hardened excrement. The tumor observed on the 2d, contiguous to the umbilicus, and which strongly resembled an abdominal aneurism, has gradually subsided, and is now entirely removed. Arterial excitement much diminished.

January 12th. The sponge, which had been introduced into the wound to stop the bleeding, was

loosened by suppuration, and was therefore removed. At the bottom of the cavity which it occupied, a pulsation was seen, which was conceived to be the beating of a small artery. The wound was filled with dry lint, and a bandage applied.

January 16th. Hæmorrhage having recurred yesterday, and the patient being much reduced by the loss of blood, it was determined to apply another ligature to an higher part of the internal iliac artery. and several of my professional friends having favoured me with their assistance, I proceeded to the operation at eight o'clock this morning. While we were fixing the patient on the operation table, a profuse hæmorrhage took place, which was stopped by Mr. Cusack pressing with his finger at the bottom of the wound, until I inclosed the iliac artery in a ligature. This was effected without difficulty, an incision having been made through the abdominal parietis, in the direction of the artery, as recommended by Mr. Abernethy, so that this and the former incision somewhat resembled an inverted *T*. The patient bore the operation with great fortitude, and his progress was as favourable as could have been expected for several days. On the evening of the 21st, however, he had a very severe rigor, which continued for almost an hour; this was succeeded by an hot fit of a few minutes duration, and the paroxysm terminated in a profuse sweat, which lasted for some hours, and weakened him exceedingly. At 11 o'clock in the forenoon of the 22d of January he complained, for the first time, of



calf of the leg and ankle; frequent vomiting and retching; pulse 130; very languid; some difficulty in breathing. From this hour the progress of unfavourable symptoms was very rapid, and could not be retarded by any of the remedies employed. She continued to suffer great pain, and to labour under the most distressing anxiety, until 10 o'clock at night, when she expired.

*Dissection.* The tumor was laid open to its fullest extent, and its putrid contents having been washed out, the internal surface presented a very irregular appearance; no trace of a distinct sac could be observed. The small branches of nerves, which seemed to have resisted the putrifactive effects of the contents of the tumor, were completely insulated, and extended through the cavity unaccompanied by veins or arteries. The muscles, except where they formed the walls of the cavity, were healthy, but somewhat paler than natural. Rather more than three inches of the femoral artery was wholly destroyed; the upper extremity of it was found in a contracted state, immediately below Poupart's ligament. The lower part of the artery contained a coagulum, which filled its cavity for several inches; the outer surface of this coagulum was very firm, of the colour of fibrine, and in close apposition with the internal surface of the artery; the red globules and more liquid parts of the clot were contained within this fibrous layer, which gave the coagulum a tubular appearance. The anterior part of the crural vein, immediately below the liga-

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of a globular figure ; it extends to the internal condyle of the femur ; has a tense firm feel, with an obscure fluctuation ; the integuments are of a dusky yellow colour, and are traversed by three or four enlarged veins.

While the patient remains in an horizontal posture, both tumors are free from pain ; but considerable uneasiness, and a sense of increased heat, are produced by much motion of the limb.

Between six and seven months ago, while employed at his trade, he received a severe blow in his left groin, from the handle of the printing press. In a fortnight after this injury, he perceived a small pulsating tumor in the part which has gradually increased to its present size. In four months from the appearance of the upper swelling the lower one commenced ; the increase of the latter has been very rapid ; its pulsation, although not so strong as in the upper tumor, was quite distinct until within the last three weeks, during which it has entirely ceased, and the tumor has become remarkably hard and tense. There is some numbness of the leg and foot, but no cedema, except after exercise. In the year 1814 he had an ulcer on his penis, for which he was salivated in one of the London Hospitals ; and although his habits have been the reverse of temperate or regular, he has since enjoyed good health.

Having travelled yesterday and last night in the

mail coach from Waterford, a distance of seventy-six miles, he feels much fatigued, and complains of feverish heat, thirst, and restlessness; pulse 90, and regular; tongue white and dry.

*Capiat Haustum Efferves. 2dis. horis, et Haust. Anod. hora somni.*

November 15th. Is much refreshed by a great deal of tranquil sleep; bowels confined.

*Capiat Infusi rosæ Cathart. unciam tertia qq. hora ad effectum.*

December 1st. Since Lawson's admission into the Hospital, his general health is improved; for several days he laboured under great agitation; and as the disease did not appear to make progress, the treatment consisted merely of quietness, a light regimen, an occasional dose of the aperient solution, and an anodyne at night, when necessary. Having been for some days free from much constitutional disturbance, it was now deemed advisable to urge the expediency of an operation; to this measure our patient assented without hesitation.

December 4th. 1 o'clock. I performed the operation of tying the external iliac artery, as in the former case; the ligature was applied with great facility; on the knot being tied, the pulsation in the inguinal tumor immediately ceased, and it became flaccid; the lower tumor remained unaltered.

plan adopted was productive of benefit ; during this period the tumor had obviously diminished, and its contents had acquired a firm consistence, but the patient complained that the instrument gave him much pain, and that his health and spirits had suffered materially from confinement, rigid abstinence, &c. the operation was accordingly agreed to, and I performed it on the first of September, being two months after his admission into the Hospital.

In the progress of the operation nothing remarkable occurred, except that an absorbent gland was so much enlarged, that it was found necessary to remove it ; the patient laboured under great apprehension, and after the first incision was made, the action of the heart and arteries was almost entirely suspended ; the pulse was imperceptible, even in the tumor, and in the denuded artery, until he was roused by the exhibition of wine and other stimulants. These circumstances were productive of some little delay.

I was induced in this case to apply two ligatures to the artery ; the upper one having been drawn as high as possible, was tied first, and the lower one having been separated from the upper to as great a distance as the connexions of the artery would permit, was also tied ; thus all that portion of the artery unavoidably insulated by opening the sheath, and by the introduction of the aneurismal needle and ligatures, was included between the ligatures when tied, and as they were applied to parts of the vessel

which were not disturbed in the operation, it was reasonable to suppose that the chance of secondary hæmorrhage, from a sloughing or ulceration of the coats of the artery, would be less than if the ordinary method was employed.

However plausible in theory the advantages ascribed to this proceeding, appear, I am not disposed to attach much importance to it; the adoption of it may be an useful precaution when the surgeon finds that he has detached more of the artery from its connexions than is necessary; but otherwise the second ligature may be an unnecessary source of irritation.

September 2d. 7 o'clock, A. M. After the operation yesterday the patient experienced no uneasiness except what arose from a sense of fatigue in the limb; he slept well last night, and is perfectly easy this morning.

*Capt. Coch. duo Mist. Ros. Cathart. tertiis horis ad effectum.*

1 o'clock P. M. Complains of nausea and thirst; pulse hard and frequent.

*Mitt. Sanguis ad 3viii.*

*Haut. Efferves. 2dis. horis.*

7 o'clock. Pulse softer and less frequent. Nausea relieved.

Sept. 3d. 7 o'clock, A. M. He was extremely restless until 4 o'clock; at this hour his bowels were freed, and he has since had some refreshing sleep. Nausea and thirst much abated.

7 o'clock, P. M. Bowels continue free, and his fever is moderate.

*A Table shewing the state of the pulse and temperature of the limb.*

DATE.	Pulse.	TEMPERATURE.			
		Aneurismal Limb.		Sound Limb,	
		Inside of knee.	Between great toe and next.	Inside of knee.	Between great toe and next.
One hour before operation	110	88°	74°	88°	74°
4 hours after do. -	88	93°	81°	90°	78°
16 do. do. -	80	90°	76°	90°	90°
28 do. do. -	104	96°	88°	94°	98°
40 do. do. -	108	94°	82°	92°	86°
52 do. do. -	120	98°	98°	98°	96°
64 do. do. -	108	98°	88°	96°	94°
88 do. do. -	108	94°	94°	92°	94°
112 do. do. -	112	94°	92°	94°	92°

Sept. 4th, 7 o'clock, A. M. Slept but little last night; complains of insatiable thirst; has a considerable oppression of his chest, a sense of weight about his heart, and often feels as if he was going to faint, pulse frequent and hard; but regular: there are a slight degree of hardness, and an erysipelatous blush about the wound.

*Mitt. Sang. ad ℥viii. Capiat Mist. Ros. Cath.*  
*M. S.*

*Cont. Haust. Efferves.*

The adhesive straps were removed from the wound, and soft dressing, with a light compress moistened with the spirit lotion, substituted.

Sept. 5th. He got some sleep at irregular intervals last night. At four o'clock this morning he vomited a large quantity of viscid bilious matter, since which the sickness has subsided, and he feels much relieved; he was purged three times.

Sept. 6th, 7 o'clock, A. M. The oppression of his chest was so severe during the night, that it was deemed advisable to apply a blister to the sternum, which has not yet produced a beneficial effect; he starts frequently from a short and uneasy sleep, and awakes in a state of alarm and agitation; he has violent palpitations of his heart; his pulse is hard and very frequent; his bowels are free.

*Mitt. Sang. ad ℥viii.*

*Capiat. Tinct. Digit. purp. gttas. x. omni hora.*

7 o'clock, P. M. He has had some sleep during the day. He took six doses of the Tinct. Digitalis, and feels considerably less uneasiness. Still, however, the action of the heart and the pulsation in the line of the large arterial trunks are violent.



*Mittatur Sang. ad ℥viii. statim ; et repetatur Venesection post horas tres.*

*Capiat. Tinct. Digital. purp. gttas. xv. tertia qq. hora.*

Sept. 7th, 7 o'clock, A. M. Blood-letting was performed at ten o'clock last night, after which he slept more comfortably than he has done for several nights ; oppression of the chest and palpitation much relieved ; bowels free ; pulse 108 ; not so hard as yesterday.

*Cont. Tinc. Digitalis.*

12 o'clock. The pulse has become more firm since morning, and the palpitation is troublesome. The bowels are free.

*Mitt. Sang ad ℥vi.*

*Cont. Tinct. Digital.*

7 o'clock, P. M. The blood-letting has afforded great relief. The pulse however is frequent, and hard as at noon.

*Rep. Venesection ad ℥vi.*

Sept. 8th. Slept a great deal during the night, and started seldom ; has neither oppression nor palpitation. The pulse 106. Complains of weakness and a slight degree of vertigo ; bowels free.

*Capt. Tinct. Digit. gull. xv. 4tis horis.*

Sept. 9th. Continues to improve. The wound has suppurated, and discharges healthy pus. There is a degree of tenderness in the course of the superficial absorbents on the inside of the thigh, and some faint red lines are observed to extend in the direction of these vessels. Pulse 94.

*Tinct. Digital. gttas. x. 6tis horis.*

Sept. 10th. His health improves daily, although there is a copious discharge from the wound, and the inflammation in the course of the absorbents is considerable. Pulse 90; bowels free.

A light bread poultice was applied to the wound, and a cold lotion to the inflamed absorbents.

Sept. 11th. Dyspnœa and palpitation have not returned for some days. Pulse 86.

*Omit. Tinct. Digital.*

Sept 19th. For some days the discharge from the wound, although of good quality, was more than could be desired; there appears to be a sinus at the lower part, from which much pus is pressed at each dressing. The upper ligature came off.

Sept. 20th. The lower ligature discharged. Complaints of great weakness.

*To have a pound of mutton daily.*

Sept. 21. The pain in his thigh was so severe last night as to deprive him entirely of sleep; the integuments in the middle part of the incision have healed, and there is a small opening at each extremity, which communicate with a large cavity. A probe pointed bistoury was introduced, and the cicatrix between these fistulous openings divided; a good deal of pus was discharged.

September 22d. Feels great pain in the thigh, a little below the wound.

*Adm. Hirudines octo parti dolenti.*

September 23d. The local bloodletting afforded much relief. The discharge from the wound continues profuse, and the patient complains of increasing weakness.

*Infusi Cort. Cinchon. 3x.*

*Tinct. ejusdem 3ii.*

*M. Capt. Coch. iii. ter de die.*

September 30th. It was necessary to apply leeches again to the thigh on the 24th, since which the pain has gradually subsided, and the discharge from the wound is diminishing.

*Contr. Mist. Cinchonæ.*

October 5th. The wound is quite healed. Although still very weak, he is able to sit up in his bed for some hours every day. The tumor in the ham is diminishing slowly; he thinks the bark mixture disagrees with his stomach.

*Omit Mist. Cinchonæ.*

*To have a pint of porter daily.*

November 30th. His health and strength are gradually improving; walks about with the assistance of crutches; the tumor diminishing.

December 24th. He has enjoyed extremely good health for some weeks past; knee joint still very stiff; the tumor much diminished.

He was this day discharged.

September 19th, 1821. I met Mackay accidentally this day. He has a very slight lameness, which he ascribes to an occasional pain in the knee, resembling rheumatism; he enjoys perfect health, and undergoes much bodily labour, without inconvenience. There is no trace whatsoever of the tumor.

## CASE No. 4.

July 17th, 1820. James M'Owen, æt. 27, a labourer ; athletic, and always remarkably healthy, was this day admitted under my care into the Richmond Surgical Hospital.

He labours under an aneurism in the left ham ; the tumor is larger than a turkey's egg ; it pulsates strongly, and is very painful ; the integuments which cover the tumor appear thin, and a thrill may be felt, which resembles that of the aneurismal varix. Pressure on the tumor, or on the artery in the groin, removes both pulsation and tumor. The leg is much swelled, and becomes very painful and tense when kept for a few minutes in a depending position.

History.—On the 4th of May last he was climbing a wall, when his heel slipped suddenly from a stone ; at the instant he felt an acute pain in the calf of his leg, which subsided in a few minutes, and he felt no inconvenience from the injury for several days. In about a week after this accident he observed some swelling of his leg, and lameness, and in some days after he discovered in the ham a pulsating tumor, which was at that time as large as a walnut. It has since gradually increased, and the pain has been so severe, during the last fortnight, that he was unable to walk without crutches.

The same plan of treatment was pursued in this case as in the former ; his habit of body being more robust and plethoric than that of Mackay, depletion was carried to a much greater extent. In a few weeks no alteration could be observed in the tumor, but he became impatient, and was unwilling to submit to a continuance of that rigid discipline, which it had been thought expedient to adopt. Towards the latter end of August the tumor obviously increased, and assumed a conical form ; at one point the integuments felt very thin, and here the tumor was particularly prominent, conveying to the touch a sensation as if some of its immediate coverings had yielded, and the sac had protruded towards the surface. The peculiar thrill was also more distinct than on his admission, and the swelling of the leg had become greater. The operation was accordingly performed on the first of September ; only one ligature was applied to the artery in this case.

September 2d. After the operation yesterday he complained only of a tingling sensation in the foot. He slept well last night, and is this day free from all uneasiness.

September 3d. He has taken some purging medicine, which has had a good effect. The tumor remains sore for some time after being handled.

September 19th. Has not experienced the slight-

est constitutional disturbance since the operation; all the functions natural. The ligature came away this day with the dressings, and half the wound is cicatrized. The tumor in the ham is firm, and a little diminished.

September 28th. The wound is healed, and the tumor much diminished; he walks about with the assistance of a stick.

Discharged.

*A Table shewing the state of the pulse and temperature of the limb.*

DATES.	Pulse.	TEMPERATURE.			
		Aneurismal Limb.		Sound Limb.	
		Inside of knee.	Between great toe and next.	Inside of knee.	Between great toe and next.
One hour before operation	62	86°	72°	88°	72°
4 hours after do. -	72	94°	92°	94°	74°
16 do. do. -	72	90°	90°	86°	74°
28 do. do. -	88	94°	94°	90°	74°
40 do. do. -	64	90°	78°	90°	74°
52 do. do. -	80	94°	94°	92°	92°
64 do. do. -	72	92°	72°	90°	72°
88 do. do. -	72	90°	74°	90°	74°
112 do. do. -	68	90°	74°	90°	74°

In the month of November this man called at the hospital to show himself; he was perfectly recovered;

had no lameness, or peculiar sensation in the limb; the tumor was completely absorbed, and he had been for some weeks employed at his usual avocations with as much activity as ever.

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### CASE No. 5.

May 5th, 1821. Judith O'Donnel, æt. 28, by occupation an hat binder, married, and had six children, was this day admitted into the Richmond Surgical Hospital, labouring under an aneurismal tumor on the posterior part of the right forearm. The tumor commences immediately below the elbow, gradually increases to the middle of the forearm, where it begins to decrease, and is insensibly lost a little above the wrist; it is very painful, pulsates strongly throughout its entire extent, and the skin which covers it has become, within these few days, inflamed and tender. The tumor is so prominent that the limb appears bent; at the thickest part its circumference is eleven inches; the corresponding part of the left arm eight inches. Pressure on the brachial artery suspends the pulsation in the tumor, and in the radial and ulnar arteries.

**History.**—About nine years ago she first perceived a small kernel in the place where the tumor



is now most prominent ; it was hard, without pulsation, and free from pain ; she is not conscious of having received any injury. During the first three or four years the increase of the tumor was very slow ; at the end of the fourth year it was about the size of an hen's egg, Since her marriage she has been obliged to use her arm at more laborious works than previously, and the tumor has accordingly increased ; but still the increase was very gradual, and she suffered no pain, nor did she perceive pulsation in the tumor until within the last three or four weeks. During the week preceding her admission into hospital the skin became red, and the pain was so severe as to deprive her of rest, and to render the hand and arm completely useless.

May 6th. I tied the brachial artery at about two inches above the internal condyle of the humerus. The pulsation in the tumor, and in the radial and ulnar arteries, immediately ceased, and the pain in a great degree subsided. In twelve hours after the operation she continued free from pain ; the tumor was less tense, but not perceptibly reduced in size.

May 7th. The pulse has returned to the wrist, but no pulsation could be discovered in the tumor ; it continues free from pain.

May 8th. Very little constitutional excitement ; her bowels have been opened since the operation ;

she has no thirst, and she sleeps well ; towards the evening of this day she complained of some pain in the tumor.

May 9th. The tumor has become tense and painful, although not so much so as before the operation ; the hand is slightly œdematous ; bowels free ; tongue clean ; pulse 80.

May 11th. Pain and œdema have diminished.

From this period the patient continued to improve ; pain and œdema shortly subsided ; she recovered the use of her fingers and hand, and she was discharged the Hospital on the 10th of June, with strong injunctions to refrain from all laborious employments.

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Being anxious, before this report was sent to the press, to ascertain the actual state of the limb, I requested one of my pupils to visit the woman at her residence, and I have received from him the following satisfactory report :—

*“ October 4th, 1821.*

*“ I have just visited Judith O'Donnel, and found her engaged in the laborious occupation of washing clothes. She says she can use her arm as well as ever she did. The tumor is nearly of the same size as before the operation, but it feels per-*

fectly solid, except at the upper and back part, where there is a small point, in which an obscure fluctuation may be detected. No pulsation whatsoever can be felt in the tumor ; the pulsation of the radial artery is the same as in the opposite arm.

(Signed)

“ EDWARD TOWNSEND.”

# **REPORT**

ON

## ***PUERPERAL FEVER,***

IN ANSWER TO QUERIES

FROM THE

**GENERAL BOARD OF HEALTH.**

BY JOHN C. DOUGLAS, M. D.

LICENTIATE OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS, &c.

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TO THE EDITORS OF THE DUBLIN HOSPITAL REPORTS, &c.

GENTLEMEN,

EARLY in the year 1820, I received the following queries on the subject of puerperal fever, in the form of a circular letter, from the Secretary of the Board of Health, to which I returned the subjoined answers.

If the document should appear suitable to, and

worthy of a place in your next volume, I shall feel gratified by its insertion.

It is but too evident that it bears the character of a hasty composition, and would admit both of amplification and amendment ; but I prefer submitting it to you in its original form, this being a literal copy of my communication to the Board of Health.

I remain,

Gentlemen,

Your obedient servant,

JOHN C. DOUGLAS.

6, *Dominick-street*,  
1st, *Sept.* 1821.

## QUERIES.

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*Query 1.* Have you known puerperal fever epidemic in your neighbourhood, and how often? State the years of its prevalence, and any facts illustrative of its mortality, specifying the places where it appeared?

Can you give any returns calculated to illustrate the period of its recurrence, and comparative severity?

*Answer.* Although I cannot positively say that I have met with puerperal fever, in a truly epidemical form, any where except in the Lying-in Hospital of this city; yet (during my residence in Dublin) few years have elapsed without my prescribing for some cases of that species of the disease, usually termed puerperal peritonitis. I here speak of practice unconnected with the Hospital. With respect to the Lying-in Hospital, I resided in it in the years 1809, -10, and 11, during which time I considered puerperal peritonitis to be there so decidedly endemial, that when any two successive months passed

without several patients being attacked with some form of this disease, it was deemed fortunate.

In the greater number of instances this sporadic puerperal fever (puerperal peritonitis) may, if judiciously treated, be subdued in the course of a few days, although its duration will occasionally be protracted to two weeks, or longer. I would suppose that the fatal cases of this casual fever, whether in hospital or private practice, scarcely rate so high as one in six; whereas in the truly epidemic fever hardly one-half of those absolutely attacked recover. I do not consider this species of the disease to be infectious.

The epidemical puerperal fever is a very aggravated modification of, if not a quite different disease from this just mentioned. It has occasionally appeared in the hospital from a very early period; but no regularity in its return has been observed. For an account of the epidemics (four in number) previous to the year 1792, I refer you to the fifth volume, second decade, of Duncan's Medical Commentaries, where there is to be had information on this subject. From that period, the fever did not here assume the epidemical character, until the year 1803, when it prevailed for a considerable period. In the winter of 1810-11, at which time I was the resident assistant, it again visited the hospital in a malignant form. And although there did not perish, during the height of the epidemic, so many as twelve patients, yet throughout the remainder of the year

1811, there were a greater number of insulated cases of fever than I considered the average of hospital disease. During 1812, likewise, although no longer officially connected with it, I had reason to know that the hospital continued rather sickly; and in the winter of 1812-13, the fever again assumed the truly epidemical character, and prevailed to an unprecedented extent. I had not an opportunity of witnessing the epidemic there in the winter of 1819-20, but I believe it exceeded in duration and fatality any that ever occurred within the British dominions.

*Query 2.* Have you known the name of puerperal fever applied to diseases differing in their nature; if so, in what does this difference consist?

*Answer.* It is customary to apply the term puerperal fever to diseases very considerably, although not entirely different; different both with respect to their exciting cause, and as to the type of their pyrexia, although always similar in their great leading characteristic,—abdominal inflammation and pain. I have for many years been of opinion, that there is not a greater difference in the type of that pyrexia, which accompanies a case of any purely inflammatory disease, as phrenitis, plueritis, &c. and from such down through every grade of fever to the plague itself, than there is between the type of the pyrexia, attending a casual\* case of puerperal fever, and of

\* By the term casual case of puerperal fever, I mean such



that attendant on the true puerperal epidemic ; and I feel myself justified in attributing the discrepancies of opinion, every where existing with regard to the nature, and the various and even opposite modes of treatment recommended by different authors for the cure of puerperal fever, to deficiency of nosological distinction.

*Query 3.* When the disease is epidemic, is it your opinion that it is always contagious? Have any facts come to your knowledge illustrative of its conveyance by accoucheurs or midwives ?

*Answer.* When puerperal fever is epidemic, I consider it to be really contagious, but, for the most part, only to Lying-in women ; I do however believe that a woman, either pregnant or whilst nursing, or even a very delicate female, for several months after lying-in, although not nursing or pregnant, might be susceptible of this disease. I likewise think that any woman, whether married or single, at particular periods, might be liable to an attack of it, if much exposed to the influence of an hospital epidemic. Cases, occurring under these different circumstances, have happened within my own

as occasionally occurs, both in hospital and private practice, when the disease is not epidemic, and which is excited by accidental causes, either during labour, or subsequently to delivery. In these cases, I presume the local inflammation more frequently to be primary, and the pyrexia to be consequential ; whereas, in the epidemical, I consider the pyrexia to be primary, and the local affection to be consequential.

knowledge. I am rather apprehensive that such contagion may be conveyed by persons much engaged in hospital duty, at a time when its atmosphere\* is heavily loaded with this peculiar effluvium. I have been informed of the circumstance of a pupil in midwifery having remarked, at the period of an epidemic, that several patients successively, upon whom he waited during labour, were seized with this disease, and died. Now it is more than possible that those women might have been infected from the contaminated atmosphere, or by some other widely operative cause; but the young gentleman became so apprehensive that he himself had been the medium of conveying the infection, that he resolved not to attend upon any other patient during the prevalence of the epidemic.

*Query 4.* Have you observed any connection between puerperal and common epidemic fever?

*Answer.* Although I am satisfied that puerperal fever, in all its variety of forms, may be generated in a lying-in Hospital, by local causes; I have no doubt of its being often excited by atmospherical influence, like common epidemic fever; and I am of opinion, that the same exciting influence, which would at another period produce common fever

\* I have readily perceived, by the sense of smell, the effluvia of puerperal fever, when epidemic, on entering a ward of the hospital.

in an individual, might, at the time of lying-in, produce puerperal fever.

*Query 5.* When puerperal fever prevailed in any lying-in Hospital with which you are acquainted, did it at the same time, or did it previously or subsequently, prevail in your town or neighbourhood?

*Answer.* Whenever puerperal fever has been raging epidemically in the Lying-in Hospital, there was then usually more of this disease throughout the city than at other periods. Whether at these times it originated in the Hospital, and was thence diffused; or whether it co-existed in the city, at large, I cannot venture to say. But I consider it highly probable that a woman who had an attack of the epidemical puerperal-fever, and who had recovered; or even a hale woman who had resided during the week of her confinement in a contaminated ward, and whose constitution was capable of resisting the influence of contagion, might convey the disease to a more delicate \* lying-in female, who happened to reside in the same lodging-house or chamber, to which such person repaired on leaving the Hospital.

\* It will from thence be readily inferred, that I consider a state of debility, from whatever cause induced, as predisposing to this disease, particularly when epidemic. It matters little whether the debility be a consequence of previous disease, of poverty, of the operation of depressing passions, or of excessive hæmorrhage at the moment of delivery.

*Query 6.* Is puerperal fever more or less prevalent of late years than formerly?

*Answer.* As far as regards the last three epidemics which occurred in the Hospital, each succeeding one was more extensively formidable than the preceding. The overgrown size of the establishment, and the unrestricted admission of patients, may be assigned as chief causes of this evil.

Whether or not the disease, independently of hospital-practice, has been more frequent of late years than formerly, is a question which I cannot pretend to decide. I believe, however, it was more the custom in former years than of late, in some places, to denominate cases of puerperal fever,—“inflammation of bowels, or the bilious fever after lying in, to which such females are subject.” And I may venture with some confidence to state, that puerperal fever is more frequent in the Lying-in Hospital than among an equal number of lying-in women throughout the city, and likewise that it is more frequent in this city than in other parts of Ireland, occurring less and less frequently, in more than an equally decreasing ratio, with the decreasing size of cities and towns, until at length in villages and hamlets the disease seldom or never appears.

*Query 7th.* Under what circumstances of the community or of individuals have you observed it most frequently to prevail? Has puerperal fever been more prevalent in winter than in summer?

Is it probable that a temperature below that of the usual habitations of the poor, may act as an exciting cause ?

*Answer.* Although no class of Society be exempt from puerperal fever, yet it prevails more frequently among the lower, where the operative causes of all contagions are more active, than among the higher.

That puerperal fever prevails more in winter than in summer, I have no doubt. The circumstance of the hospital epidemics having occurred in winter, usually commencing about the month of November, would seem confirmatory of this. I am likewise satisfied that a temperature below that of the usual habitations of the poor, acts powerfully and frequently in inducing this disease; and it is by no means unusual to hear women, when suffering in its last stages, attribute their illness to this cause alone.

*Query 8.* Have you reason to think the disease is more prevalent in lying-in Hospitals, when those establishments are full, than at other periods ?

*Answer.* Until after the epidemic of the winter 1788-89 the number of beds in the Hospital never exceeded fifty; which I would conceive not more than sufficient for safely accommodating one thousand women; and yet nearly fifteen hundred were then annually received into them. In the

year 1808 there were but seventy-seven beds, a number sufficient for not more than fifteen hundred patients annually; and yet upwards of two thousand were then admitted. In the year 1810 we had only ninety-three beds, a number scarcely sufficient for the proper accommodation of two thousand patients, and yet three thousand were taken in within that year. The epidemic of the winter 1810 was perhaps thus partly generated. The number of beds was not, however increased, until the greater epidemic of the winter 1812-13 rendered the propriety of such a measure more evident; the adoption of any plan to restrict the ingress of patients had scarcely been ever contemplated.

From the foregoing and other considerations, I do firmly believe a crowded state of lying-in hospitals, and a hurried succession of patients, highly conducive to puerperal fever.

*Query 9th.* Have you known any lying-in hospital in which puerperal fever has seldom or never appeared? Describe the circumstances of such hospital, as to construction, number of patients, and discipline?

*Answer.* I am not particularly acquainted either with the structure or regulations of any lying-in hospital except the one of this city. I have however visited that of Edinburgh, as also the City of London Lying-in Hospital. The wards of this latter appeared to me by no means exposed to the

transmission of such currents of cold air as are usually admitted to pass through the Dublin Hospital. I made some remarks specifically on this head, and the physician assured me that a case of puerperal fever was there a rare occurrence.

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*Note.* If you have any measures to propose either preventive or remedial, not connected with the above queries, be so good as to state them fully.

### OBSERVATIONS.

As the greater number of women who die at the period of childbirth are cut off by puerperal fever, and as there is no disease in Europe, incident to woman, less obedient to the power of Medicine, too much attention cannot be paid to preventive measures.

Having hitherto presumed that this inquiry has been instituted in consequence of the liability to puerperal epidemics of the Lying-in Hospital of this city, I may here venture to remark, that I consider this establishment at present on quite too extensive a scale. Besides the objection of magnitude, the site and construction of this hospital are not the best adapted to healthiness ; and these, with other evils, operate in more than an equally increasing ratio, with the increased size of the establishment. I am therefore of opinion that, in order to render

this magnificent building really subservient to the public good, the admission of patients should be so restricted as that their number shall not annually much exceed eighteen hundred. And I may here remark that this hospital never was, at any period, more healthy than during the seven years of the mastership of Doctor Evory, when this number was nearly the average of admission.

If such restriction were to be adopted, it might be necessary in consequence thereof, in these disastrous times, to provide some substitute of relief for the numerous lying-in poor of this city. And in case of any new establishment being erected, I would propose that it should consist not merely of hospital-accommodation, but that there should be connected therewith a system upon the plan of dispensaries. I consider that an establishment containing fifty beds might safely accommodate one thousand patients annually; and there might likewise, if necessary, be attended at their own homes, by instructed persons of the institution, from one to two thousand women. The entire expense of thus relieving upwards of two thousand women annually would not perhaps exceed fifteen hundred pounds.

Before I proceed to speak of remedial measures, I think it desirable to make some attempt at reconciling the present discrepancy of opinions with regard to the nature of puerperal fever, whether it be an inflammatory or putrid or nervous disease; and to account for the various and even opposite modes



of treatment recommended by different authors for its cure.

Indeed I have already said, in my answer to Query, No. 2, that I consider part of the hitherto ill success in the treatment of this disease attributable to deficiency of nosological distinction. And although I do not feel myself altogether competent to supply such deficiency, yet, until a more judicious arrangement be advanced, I propose to divide puerperal fever into three species, and to place them under the following heads, viz.

Synochal puerperal fever,  
Gastro-bilious puerperal fever, and  
Epidemical or contagious puerperal fever.

The cases that I rank under the first distinction are all those attended with pyrexia, similar to that of any other purely inflammatory disease. These are neither produced by contagion, nor are they themselves infectious. They are usually the result either of tedious or ill-managed labour, or of exposure to cold or other adventitious cause, after delivery.

This form of the disease is to be subdued by copious blood-letting, and other sedative and evacuant remedies, viz. antimonials, purgatives, enemata, fomentations, &c. The abstraction of blood, however, should here be considered our sheet-anchor:

this fluid must not only be early and copiously taken, but the operation should be repeated in proportion as the pulse or abdominal pain may afterwards indicate. The pulse, I may remark, is often in this, as in every variety of abdominal inflammation, deceitful. I therefore regard the degree of pain felt on pressure, as a preferable criterion, by which to regulate the abstraction of blood; and I cannot refrain from stating it to be my opinion, that the reason of this inestimable remedy having so frequently failed of the desired effect, and having been, by some condemned as useless or even injurious in this and other diseases, is not owing to genuine inaptitude in the remedy, but to the inefficient manner in which it is often applied by timid practitioners.

Within the second distinction I include those cases wherein the disease does not so rapidly assume, or at least manifest, a decidedly inflammatory character; not as in the former, commencing with a bounding, incompressible pulse; but, with a pulse frequent, hard, and concentrated, as is usually observed in synochus, or the common epidemic fever; neither are the symptoms of abdominal inflammation so early evolved. Yet such inflammation does exist, and progresses, when not checked, although more slowly, and more obscurely than in the former. The tongue is here loaded as in common bilious fever; whilst in the former it is usually white, or cleanly florid, with sometimes a glazed appearance. The treatment here should likewise commence with

blood-letting, but in more moderate quantity ; immediately after which ten or twelve grains of calomel should be administered, and followed in a few hours by an ounce of castor oil combined with some other briskly purgative medicine. These medicines, unless given in large doses, will produce but little effect, in this complaint ; and it is of paramount importance that the mucous surface of the intestinal canal should be effectually acted upon early in the disease in all cases, and more particularly whilst the morbid action of the peritoneal covering is under a kind of panic from the blood-letting, and before that inflammatory action can re-organize its broken force. Often, by such prompt treatment, will the disease be arrested *in limine* ; should it however advance, whether in increased or subdued violence, purgative medicines, varying in kind, must be daily administered, assisted by enemata, fomentations, topical blood-letting, &c.

This variety of puerperal fever may be induced by causes similar to those producing the first species, acting upon a constitution already debilitated, by deranged or torpid action of the digestive organs. Such a state, *to wit*, as would predispose the same individual to common epidemic fever ; if assailed, at any other period, by its exciting causes.

That form of the disease which I arrange under the third head, is the really contagious or epidemical puerperal fever, and although agreeing with the others in the great leading symptoms, inflam-

mation, pain, tumefaction and tension of the abdomen, yet differing from them in many material characters. The sensorium here is seldom in any degree disturbed ; whereas in the others it is so, frequently, and even sometimes is excited to high delirium. The pulse here is usually from the moment of attack, soft, weak and yielding, and in quickness often exceeds 160, whereas in the first species it is full, bounding, and incompressible ; and in the second, small, hard, and concentrated, and in both moderately quick. The eye, instead of being suffused with a reddish or yellow tint, as in the others, is here generally pellucid, with dilated pupil. The countenance, instead of being flushed as in the others, is here pale and shrunk, with an indescribable expression of anxiety ; an expression altogether so peculiar, that the disease could, on many occasions, be pronounced or inferred from the countenance alone. The surface of the body, instead of being as in the others, dry and of high pyrexial heat, is here usually soft and clammy, and of heat not above the natural temperature, and not only is the skin cool with clammy exudation, but the muscles to the impression of the finger, feel soft and flaccid as if deprived of their *vis insita*, by the influence of the contagion. Indeed there is such prostration of muscular strength, and depression of vital principle, from the very onset of the attack, that I must suppose the contagion to act upon the human frame, probably through the medium of the nervous system, in a manner analogous to that of the conta-

gion of the plague ; and perhaps the African plague does not commit greater havoc among an equal number of infected persons than puerperal fever in this country ; nor is puerperal fever less quickly fatal than the plague itself.

Without pretending to detail any of the various modes of treatment, which I may have seen pursued either successfully or otherwise, I would here recommend the practitioner to commence by administering ten grains of calomel, combined with two grains of powdered opium, in the form of bolus, or of pills ; likewise, as early as possible, a briskly purgative enema. After the operation of the enema a number of leeches, from two to four dozen, according to circumstances, should be applied to the abdomen, and the abdomen should afterwards be stuped with flannel clothes, wrung from warm water ; and not only at this period, but frequently through the whole course of the disease, should such fomentations be used. Three or four hours having elapsed from the time of administering the calomel and opium, three drachms of pure oil of turpentine, with three drachms of syrup and six drachms of water, in the form of a draught, should be swallowed ; and, after the lapse of another hour, this is to be followed by an ounce of castor oil, or some other briskly purgative medicine. In some instances, the oil of turpentine and castor oil may be combined in one draught ; but I generally prefer giving the turpentine as here recommended. Some of these remedies, occasionally assisted by others suitable to the peculiarities of the

case, are to be repeated as circumstances may indicate ; but I would not be disposed to repeat the internal use of turpentine oftener than twice, in any case whatever. In several cases, particularly where the debility is very considerable, the blood-letting may be altogether omitted, and in these cases a flannel-cloth, sopped in oil of turpentine, should be applied to the abdomen, and allowed to remain on for the space of about fifteen minutes. This external application of turpentine, without either its internal use, or the aid of blood-letting, I have frequently experienced to be entirely efficacious in curing puerperal attacks ; and although I have hitherto omitted to speak of turpentine for the cure of the other varieties of this disease, yet I would not feel as if I were doing justice to the community, if I did not distinctly state that I consider it, *when judiciously administered*, more generally suitable, and more effectually remedial, than any other medicine yet proposed. I can safely aver I have seen women recover, apparently by its influence, from almost hopeless conditions ; *certainly* after every hope of recovery, under ordinary treatment, had been relinquished.

Although I do not feel it to be absolutely necessary here to offer any opinion as to the *modus operandi* of turpentine, in the cure of puerperal fever, yet I beg to add the following passage from the second number of the *Medico-Chirurgical Review*, page 180 :—" The success which has attended the administration of oil of turpentine, in puerperal peritonitis, first recommended by Doctor Brennan of Dublin, is a proof of

the power of purgatives in this disease. The turpentine is not only a potent cathartic, but excites powerfully the whole mucous membrane of the intestines, and thus derives the morbid irritation from the peritoneal tunic to a secreting surface, where it is carried off by the increase of secretion itself." This appears a philosophical and satisfactory explanation of the *modus operandi* in those cases, wherein this medicine operates in a manner decidedly purgative. But I have known turpentine in several instances, even by its external application, relieve the most urgent symptoms of this formidable disease in the course of fifteen or twenty minutes, without producing any sensible evacuation. I am therefore induced to think, that in these instances at least, the beneficial effects result from the influence of its quickly diffusible power, probably acting upon the nervous system. It may not be quite irrelevant for me here to notice, that it is nearly seven years since I first promulgated an equally favourable account of this remedy, since which period I have frequently been assured of its very general utility in puerperal fever, by some practitioners; from others again I have heard of its total failure, and final condemnation. This is a wide difference on one of the most momentous medical subjects that ever was agitated; and I am inclined to think, that the causes of failure, and consequent condemnation, would admit of very easy solution.

At a period subsequent to the above I renewed the statement of my confidence in turpentine for

the cure of this disease ; and at that time I advanced an opinion that it might be found beneficial in many other febrile attacks, particularly in those attended with inflammation of any of the abdominal viscera ; and I now perceive, by the report of Doctors Hewson and Chapman, Physicians to the City Hospital in Philadelphia, dated 7th September last, that they have found it pre-eminently efficacious in the cure of a malignant fever then raging, in some respects resembling the former yellow fevers of that city. They state, “ in the management of the disease turpentine, on the whole, strikes us as having the strongest claims to attention. The cure of several of the least promising of our cases can alone be ascribed to it ; yet, like other remedies, it is not susceptible of an universal application.”

Now there appears to be a striking analogy between the present malignant fever in Philadelphia, and the puerperal epidemical fevers of the Dublin Lying-in Hospital. These Physicians state, that “ the character of the fever was of typhoid malignity, and that the stomach, by examinations *post mortem*, was found almost exclusively affected with a species of erysipelatous inflammation, in various gradations of violence.” The contagious puerperal fever of Dublin is, I venture to pronounce, neither more or less than a malignant fever of a typhoid character, accompanied with an erysipelatous inflammation of the peritoneal covering of the stomach, intestines, and other abdominal viscera.



It must, however, be distinctly understood, that I here allude to the type of the pyrexia of epidemic fevers in Lying-in Hospitals. For I am led to believe, when puerperal fever happens to be epidemic at large, in towns or districts, that its pyrexia is rather of the synochal character, and requires for its subjugation the bold and decisive depletions, recommended in Dr. Armstrong's invaluable treatise on this subject.

**MEDICAL REPORT,**  
CONTAINING AN  
INQUIRY INTO THE CAUSES AND CHARACTER  
OF  
**THE DISEASES**  
OF THE  
*LOWER ORDERS IN DUBLIN.*

BY T. C. SPEER, M. D. M. R. I. A.

LATE PHYSICIAN TO THE DUBLIN GENERAL DISPENSARY.

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**THE** diseases of all large cities must have a certain correspondence with each other, notwithstanding the varieties of circumstance under which they may be placed as to climate, soil, and situation. Where the common elements of life and health, as air, food, and water, undergo such rapid and irregular consumption and vitiation, it is evident that the changes they sustain in quantity and quality must produce corresponding changes of disease to a certain extent.

Where so many living beings are congregated in a given space ; where there are so many mouths to feed, and so many lungs to fill, those elements, thus depraved and diminished, must necessarily produce correspondent changes, not only on the organs with which they are more immediately concerned, but on the system in general.

Hence we find that *contagion* taken in the wide and general sense of the term, constitutes the grand connecting and assimilating principle of *city disease*, and that to avert epidemics, or mitigate their effects, is the chief means sought for in the preservation of the public health. We know that, although the atmosphere is its great medium of operation, the social fabric is its great organizer, as the term *epidemic* implies. On this subject, however, it is not my intention to offer any thing here ; the doctrine and theories of fever have been so often and ably discussed, that I believe, but little more remains to be said.

But it must appear, on inquiring into the history and causes of *city disease*, that contagion, using the term as above, is not the only peculiarity, or connecting principle in its formation. We find other and important links in the chain, which, though of very inferior consequence, should, however, be carefully taken into account. Among these the chief, perhaps, arise from the peculiarities of habit, occupation, and character, which a city life affords ; the effects produced by the pursuits of arts, manufac-

tures, and commerce, must, as opposed to those of agriculture and rural affairs, present distinct and decided effects on our physical frame, and in the production of disease must have powerful and peculiar influences.

This law however, like most similar laws of generalization, is so loose and wide in its definitions and distinctions, so subject to exceptions and irregularities, that unless perhaps in its application to the lower orders of society, we cannot be much governed by it; here, however, it seems to hold strong ground. Amongst the lower orders the deviations from health, arising out of the above circumstances, must be more numerous, and these deviations must more resemble each other; amongst them also seem to exist the true cradle and depôt of general disease, the causes above mentioned, and others infinitely more powerful being superadded. In this class the march of population and poverty seem uniform, and in direct ratio with each other; and as the lines and forms of distress appear more decided and varied, so do the lines and forms of disease appear more distinct. Amidst those wretched scenes, the philanthropist will have his best studies, and the physician his best practice.

But, notwithstanding this apparent uniformity of disease in cities in general, and their lower orders in particular, yet the distinctive and peculiar features belonging to each must always demand our close observation; and comparative views, with our neigh-

bours, are perhaps the best means whereby we can appreciate them.

These features must, in the first instance, relate to the influence of climate and situation on the physical and moral constitution ; and here I cannot help diverging a little from my immediate subject. Although in the formation of national character, even in the lower orders, this influence has been often denied, at least taken into very little account ; and although government, laws, religion, and education, must be considered as constituting the great and immediate mould in which this character is cast, yet I cannot help thinking that climate has great influence, and that this island furnishes a strong proof of it. Irish character, like Irish climate, is full of peculiarities, and without being fanciful, I think we may trace a congeniality between them ; like the climate, it abounds in vicissitudes, varieties, and extremes ; between the bright and dark, little medium is observed. It is to the lower orders, of course ; that this observation chiefly applies ; with them civilization seems chiefly made up of two of the materials above mentioned, viz. education and amenability to the laws. Now these are the points in which our lower orders, as compared with those of our neighbours, seem particularly backward ; two, therefore, out of the four moral causes being more or less withdrawn, the influence of natural causes, such as climate, must, with us, be infinitely greater.

All this, however, though it may afford abundant and curious matter of speculation to the philosopher, does not enter into our present views, although it is by no means unconnected with them; nor can we deny that the operation of such circumstances as these, must, in a metropolis, be materially interfered with and lessened.

The general peculiarities of Dublin as to climate, have been often described. Although in their connection with and production of disease, they afford some remarkable features, as shall hereafter be mentioned, yet I believe we possess as many advantages in this way as our neighbours; and indeed, of the salubrity of Ireland in general, its old and best historians have given the most ample testimony.\* In situation, soil and water, Dublin, also possesses considerable advantages, and in short it does not seem to present more facilities in the formation of disease than the great towns or cities in Great Britain.

All these natural advantages, however, though considerable, are marked with certain peculiarities as before mentioned, which from their influence require particular notice. But we must look to other

\* Giraldus Cambrensis and Boate. The former says "*aeris tanta clementia est: ut nec nebula inficiens, nec spiritus, hic pestilens, nec aura corrumpens:—Medicorum operum parum indiget insula: morbos enim homines praeter moribundos paucos invenias inter; sanitatem continuam mortemque supremam nihil fere medium.*" Cap. 9.

and more copious sources, in inquiring into the general state of health of the poor of Dublin; we must look to other causes to explain that vast and complicated mass of disease which they present, and which, perhaps, exists there more abundantly than in any city in Europe of equal size and population.

An inquiry of this kind must, under all circumstances be attended with the utmost difficulty and labour. The sources of disease, whether natural or acquired, seem so numerous, so mixed and confounded with each other, and so united in a circle, that it often becomes impossible to trace the separate relation of cause and effect; perhaps the only way to approximate to any thing like a general outline, is by classing them under certain genera and species; and even this we cannot attempt but in a most imperfect manner.

The practice of a general Dispensary is perhaps the most complete introduction to the diseases and indeed to the distresses, habits, and character of the lower orders of a city. Sorrows and sufferings are here unveiled, which shame will hide from the public eye; here we shall see how the chain of poverty has its various links, and the cup of bitterness its various dregs; here we become associated with disease in all its varied and complicated shapes, and here we are most promptly and powerfully called on to combat it with the rules of our art.

Dispensary practice has its advantages and disadvantages pretty equally mixed ; it creates promptitude ; it affords a wide range of insight into local peculiarities ; it opens an immense and diversified page, not only in the book of medicine, but of mankind ; it breaks away the fancies of the closet, and the bondage of the schools, and gives confidence and courage at the bed-side of a patient. On the other hand it has its disadvantages ; it creates a coarseness of practice ; we know we are dealing with raw and uncertain materials, and we find the most common plans of treatment often answer the best ; by these habits our thinking and theorizing powers are weakened and hurt ; we cannot gain very much as to the effects of our medicines, because we know these effects may be and are counteracted by improper diet and regimen. We cannot, as in Hospital practice, restrict our patients to certain rules and laws, nor confide them to nurses or even friends who can be relied upon. We reason, therefore, much less on the *modus operandi* of our medicines, and thus an unfair spirit of distrust and empiricism may be generated.

In a moral point of view there cannot be presented perhaps a more distressing picture than by such practice. When there is such a combination of sufferings we have the most difficult part to play, and our feelings are appealed to in every attitude. We find poverty and disease mutual cause and effect ; we can only offer medicine, and what is this to relieve such wretchedness ? These poor creatures, friendless



and forlorn, though they procure medicine, cannot perhaps procure food ; though they get our advice, cannot perhaps follow it.

Although aware of all these sufferings and inconveniencies, yet from an anxious wish to become acquainted with the local peculiarities and diseases of the lower orders of this, my native city, from which I had, for many years been estranged, I sought for and obtained, on my arrival here in 1818, the practice of the Dublin General Dispensary—an institution to which if I could, in the slightest degree call the public attention, I should feel much gratified. The benefits that have resulted from it for nearly 40 years, the period of its establishment, are well known, and can scarcely be calculated. I believe there is not an institution in this charitable city that more merits a rescue from its declining condition ; the objects to whom it extends its relief are of all others the most deserving of public pity—poor room-keepers ; obscure, unknown and unobtrusive ; with too much pride to stalk abroad in barefaced mendicancy, and too much poverty to conceal the amount of their wretchedness ; its operation is not confined to parishes or districts, but takes in the whole city, and thus affords the widest and most extensive relief.

The opportunities resulting from the practice of this Dispensary have afforded me some particular views of the diseases (with their causes and charac-

ter) of this class of people ; and I have thought the subject worthy of communication, more especially when viewed with reference to similar classes in the neighbouring countries, where, from a long residence I have been enabled to estimate, more clearly the peculiarities of our own. In a paper however of this kind we cannot enter upon minutiae. The subject is most extensive ; it requires more time and space than we can at present allot to it, and more experience than has been as yet afforded me. Broad and distinctive features are all we shall aim at, and even this I shall attempt with diffidence.

The causes which tend to the formation of disease in our lower orders, or those which influence or are connected with it, may be, I think, divided into certain genera and species, as before observed, although indeed they often seem mixed up with each other, and difficult to separate. Under the former we may mention *Climate—Poverty—Population* and *National Character*.—The species emanating from them to be noted under their several heads ; by this arrangement, although imperfect, we may perhaps trace some of the chief features of disease.

## CLIMATE.

The general peculiarities of Dublin as to climate have been often described, although they have not much engaged the attention of modern medical observers. Under the term climate, I confine myself to temperature, wetness and winds, excluding atmospheric pressure, &c. Its peculiar character seems that of variability. It is, however, in the former of these, *viz.* temperature, that this variability appears so manifest; its wetness and winds, though variable, are less sudden in their variations. Extremes of temperature, arising from season seem not near so great as under similar latitudes in England or the continent, the greatest heat of summer seldom exceeding 75° Fahrenheit, and the greatest cold of winter, being seldom under 25°. In this point, therefore, Dublin possesses great advantages over London or Paris, where the thermometric range is much more extensive, and the extremes much more severe. But it is in the intermediate degrees between the extremes above mentioned, that our temperature varies so often and so suddenly; even in the 24 hours, variations will amount to 20, 25 or 30 degrees, so that we have often seasons of the day, as well as seasons of the year. Those distinct lines of demarcation which seem to separate the latter in England and Scotland, and much more in France, are with us fainter, and blend more into each other,

and it is only at the latter end of each season that they seem to exhibit their true character. The changes of temperature in these countries seem more permanent and regular; they more observe stated periods of revolution, and these periods are more to be relied upon. But with us they cannot much be depended upon, as the variations are quick, sudden and irregular.

Although however in its temperature the atmosphere of Dublin seems so fickle, yet in its winds it possesses considerable regularity and advantages, both in quantity and quality. It appears from the observations of the indefatigable Dr. Rutty for 43 years, that the westerly and south westerly winds are the two grand trade or reigning winds of this island; that compared to all others they are more than three to one, and that they blow most in summer, autumn and winter; that the easterly winds are most common in spring and summer, and nearly double to what they are in autumn and winter; that the north-east blows most in spring, and nearly double to that in autumn, winter, &c. Speaking of our great prevailing winds, the west and south west, the Doctor observes, “ they are by far the most  
“ wholesome, and the changeableness of our weather,  
“ attended with a few colds, may, upon the whole,  
“ be deemed an advantage, because the excess of  
“ one quality of the air is tempered by the opposite  
“ one, as cold by heat, dryness by moisture, and  
“ whatever may be said of the coldness or moisture  
“ of our summers, I have shewn our peculiar privi-

“lege in being more exempt from the N. and E.  
“blasts than our neighbours.”\*

These are the remarks of a most faithful and accurate observer ; they were made above 50 years since, and I believe they in general correspond with those of Mr. Kirwan, Drs. Patterson, Barker, and others, who have since then kept meteorological registers.

Dublin also, from its situation, possesses other considerable advantages under this head : bounded on the south, south-west and south-east by a range of mountains, and intersected by a river which flows parallel to this range, fresh currents of air are constantly kept up between, and thus distribute their freshness more or less over the whole city. Storms, thunder, lightning, and other meteoric effects are very rare.

Next to variability of temperature, humidity seems the most characteristic feature in our climate ; not merely that which is indicated by the rain gauge, but the hygrometer ; and here again our atmosphere shews its usual character of fickleness ; our showers of rain seem much more frequent, but much less permanent than in any part of Great Britain, except perhaps the western coast of Scotland and the Hebrides, where I scarcely observed a

\* See Ruttys Natural History of the County of Dublin, 1772.

day without rain, even in autumn. In the quantity of vapour held in solution in our atmosphere, there appears however no great variation ; it seems constant and most abundant ; and although we are often told that our seasons are much damper than they were forty or fifty years since, and that they are increasing in dampness ; yet from the observations of Dr. Rutty, and the later ones of Mr. Kirwan, it does not appear that there is much difference. Dr. Rutty's hygrometer was certainly not the most delicate one, but in other respects his observations, I believe, are much to be relied upon. Mr. Kirwan's accuracy is too well known not to consider his statements as fundamental results ; the hygrometers he employed were, I believe, those of Saussure and De Luc, and also one of his own construction ; and the laborious attention he paid to this subject, as well as to all points connected with our weather I, for many years, was a close witness of. The state of the barometer, thermometer, hygrometer, winds and rain, was every day committed to his register, morning and evening, and the accuracy and fidelity with which they were noted have never perhaps been surpassed. To these instruments he also added an anemometer (which he constructed himself) for ascertaining the force of the winds, but whether he relied much on its indications I cannot say.\*

\* In referring to these labours, how can I suppress feelings of pride and pleasure—for more than eight years the only pupil of this great and good man, I learned from his life my best lessons, and from his lips my first precepts of science.

When we look to the situation of Ireland, it will assist us in explaining this great humidity of its atmosphere, we must look to its insularity, we must see that it lies in those latitudes which, according to Mr. Kirwan, are most favourable to the production of rains ; we see its extreme western position, and that it is the first land within these latitudes which the westerly winds and marine clouds of the Atlantic have to break upon. These clouds, differently electrified, mutually attract each other ; the particles unite ; rain is formed ; our western part is one of its first receptacles, and to this humidity its generally mountainous character materially contributes.\*

To these causes of humidity Dublin also lies equally subject with other parts of Ireland, or nearly so ; on the S. W. and S. E. it certainly is sheltered by its range of hills from the winds, which are generally the most rainy ; but to the west and north west, lying in a vast plain, between which and the Atlantic no great mountain barrier is interposed, it is exposed to those marine clouds just mentioned as so productive of rain, and which, on the western coasts of Europe, (particularly according to La Cotte, between  $47^{\circ}$  and  $60^{\circ}$  latitude) shew themselves so abundantly.

Such seem to be the chief peculiarities of our climate, and we may, I believe, as compared with that of England, say, in general, that it is more free

† See Kirwan's *Variations of the Atmosphere*, 1802.

from extremes in temperature, but more variable, humid, and cloudy ; that our seasons are less distinctly divided, our springs more cold and severe, our summers more wet and temperate, our autumns more alike each other, and our winters much milder. Speaking without comparison, it appears from various and numerous observations, that spring is our severest season, summer our wettest, autumn our driest and warmest, and that our winters are, except towards the close, generally mild and open.

Such, therefore, being the general peculiarities of our climate, it remains for us to inquire how far they are concerned, or what influence they may have in the production of disease. Under the head of temperature we must look to its vicissitudes alone ; we must look to the seasons at which these vicissitudes most prevail,—but we find them occurring at all seasons and periods, and must accordingly be prepared for them. It is the order of phlegmasiæ that seems here chiefly concerned ; the sanguineous system is the one chiefly affected ; inflammation is the general character. Sudden changes of temperature will produce more or less sudden determinations to particular organs, and thus the balance of circulation will be more or less disturbed and deranged. Although our degrees of cold seldom fall under  $25^{\circ}$  yet when with this our general humidity is combined ; when we consider the great changes they undergo, and above all, when we look at the unprotected, ill-fed, ill-clad or almost naked bodies on



which these are all operating, we cannot be surprised to find that disease is greatly favoured.

In the production and developement however of these diseases, there seems nothing very striking or peculiar; they are characterized as above mentioned by an inflammatory tendency. Varieties of condition in the organ affected, and varieties of seasons seem their chief modification, particularly the former, and in their existence and support they seem so mixed up with other causes and circumstances, to be mentioned hereafter, that to class them under temperature alone would be very imperfectly assigning their origin.

How far humidity, unaccompanied with severe cold or heat, contributes to the production of disease or health, is as yet a point not clearly settled; the latter would with us seem rather to be the case. Dr. Ratty thought our moist seasons the healthiest, at least much freer from epidemics, and his various observations go decidedly to confirm this opinion; this has also been the opinion of other observers since his time, who think that, unless with great variations of temperature, severe cold, and easterly winds, our humid seasons are in general our healthiest. A single proof of this seems to have been furnished in the year 1816, which was remarkably healthy and remarkably wet. Dr. Franklin, and Dr. Percival of Manchester, conceived that moist seasons are healthier than dry ones, *ceteris paribus*; and Sir John Pringle seems to have been

of a similar opinion. It is only therefore in its combination with extremes and varieties of temperature, &c. that we can consider humidity in its promotion of disease, and even here we know not how far to go.

Spring is the season of decided pressure ; its vicissitudes of temperature are more strongly marked by far than any other. At this season alone, easterly winds prevail, and extremes of cold are most frequent, and with these humidity is often combined, though much less so than in the other seasons\* The pulmonary organs, the passages leading thereto, and their membranes, are the chief seat of these affections. In London this class of diseases seems most abundant in winter, but with us spring is the grand season of attack. The cases I have met with of the above in this season are in point of number nearly threefold to those of any other, and in point of acuteness and rapidity of progress by far exceed any thing I have observed. Indeed I am inclined to think that our spring is the only season that has its characteristic class of diseases, and that this class consists of the affections above mentioned, *viz.* inflammation of the lungs, pleura, bronchia, trachea, &c. The other sea-

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\* Dr. Edward Percival, in his excellent paper on the Epidemic Fevers of Dublin, for 1813-14 and 15, states, that from the commencement of spring to midsummer was the great period of admission to the Fever Hospitals. See Transactions of the Association, 1817.

sons are too much blended into each other to produce such decided effects. Certainly where a febrile and inflammatory disposition has existed, or where, as in many worn-out constitutions, there are organs in which disease had been long lurking, these after-seasons may rouse it into fresh action, but they do not seem to have, like spring, the power of creating it.

Dr. Edward Percival admits the difficulty he had in drawing even his epidemic cycle, and remarks, that the character of these epidemics was alike fickle as that of the seasons. In our eagerness after generalization, we are in the habit of saying and thinking that the division of the year should be like the division of the body; that the winter and spring should have the cavity of the thorax, and the summer and autumn that of the abdomen. Every year will convince us more and more of the fallacies and looseness of such doctrine; and will moreover convince us of the uncertainties of British climate, and that with us in particular not one of the seasons (except perhaps spring) can be depended upon in its effects.

Notwithstanding the severity of the spring and our general humidity and situation, I have very rarely met with scrofula here (at least in its usual forms of developement) compared with the prevalence of that disease in England and Scotland, particularly in the latter; and notwithstanding the ravages which this season makes in the pulmonary

organs, I believe that tubercular phthisis is infinitely more rare with us than in those countries. We might also expect from the nature of our spring, together with the prevalence of easterly winds at this period, and from some indications which the neighbouring soil presents, that intermittents would be numerous, but I have found them exceedingly rare in general.

Catarrh, pneumonia, pleuritis, general inflammatory affections of the chest and throat, sudden and acute inflammation of the muscles and joints, from sudden applications of cold and damp, are the chief diseases of our spring, and indeed the latter part of our winter, and they are all characterised by singular acuteness and violence.

The other seasons, with reference to their connection with disease, do not seem sufficiently striking to be worthy of notice—our summers and winters are but moderate, and it is only at their latter part, when they blend into their successors, that their effects are strong. Our heats of summer are too mild to produce much gastric, hepatic or intestinal derangement;—they may revive lurking disease, but they are not strong enough to create it. Nor do our colds in the winter, unless at the approach of spring, seem to have much stronger effects on the pulmonary organs.

## POVERTY.

We come now to a most extensive and important page in the book of disease. Under this head indeed might be classed the greater proportion of its contents—the varieties of form and degree under which it is exhibited, and its general severity of pressure may much assist in explaining that complicated mass of disease so manifest in the lower orders of our city.

To enter into the various causes of this vast and overgrown state of pauperism is not our business here. We have to look into its modes of operation and the effects it produces; among these *Diet* claims our first attention, and points out some of the most fertile sources of disease.

The quantity and quality of this are alike poor; the principal articles seem to be potatoes, salt fish, and tea. Potatoes are the grand nutrient principle and support of existence, and without this invaluable vegetable, hundreds must daily drop into the grave. Always a favourite, and always easily obtained, it forms the great barrier to the ravages of hunger, and indeed constitutes almost the only one. Next to the potatoe, salt food seems the favourite article, particularly salt fish. Flesh meat can seldom be procured, and of this the salt kind is preferred, and particularly bacon. Of fish, herrings are the favourite species. This attachment to salt food probably arises

from two causes : first, its greater cheapness, and secondly, its stimulating and sapid quality. It is impossible not to notice the preference which the lower orders here, compared with those of England, have to *stimulating*, or flavourous, rather than *nourishing* food, and indeed their carelessness about the latter except potatoes. This may be partly explained from their national character, as will hereafter be mentioned. In the diet of the lower orders in England, nourishment is the grand object, and the rules of their diet are conducted with a system and an arrangement completely unknown here. With us what excites is the chief consideration, and as to regularity in meals the poor are very indifferent about it. With the former the *stomach* is the presiding organ ; it seems to hold dominion over all the others, and to be a complete tyrant. With us the *nerves* appear to hold this place, and to these a great deal is sacrificed. It is impossible not to notice, with the lower orders in England, when ill, that their great and first complaint is “ they can’t eat ;” here the general complaint is, that “ they have a fluttering or oppression about the heart.\*” Although in the large towns and cities there, as in Scotland, this distinction may not be so strong, and although the proportion of stimulating to nutritious food and drink is much greater from various causes, yet the latter is always a paramount object of atten-

\* In illustration of this we may remark, that wine, with the lower orders here, seems the sovereign cordial in most of their diseases—they conceive it almost a charm.

tion with them ; they conceive that eating alone produces strength and health, and they find the same degree of pleasure in it that the lower orders here do in drinking. With us nutrition is slighted, except in potatoes. Bread, cheese and oatmeal give way to this vegetable, in like manner as porter and ale give way to whiskey. With the lower orders in France, bread constitutes the grand nutrient principle, and of this immense quantities are consumed. With those in Scotland, oatmeal and potatoes are the chief articles of food, and in both countries great regard is always paid to nourishment. Notwithstanding, however, this carelessness among our lower orders, they are capable of labours and fatigues equal, if not superior to the others, and nature appears to have eminently gifted them with the hardiest and most vigorous constitutions. We know that in London the hardest species of labour are often confined to the lower orders of the Irish, and in our own streets we every day see surprizing loads and burdens carried by women.

Under the head of diet, *Tea* seems to hold the highest rank with our poor ; unlike its more dangerous rival, whiskey, its draughts, though impoverishing, are not delirious ; if it drowns sorrow, it does not drown sense ; if it gilds the gloom of poverty, is not the delusion a blessing ? It seems, indeed, the general panacea, always affording comfort, calmness and consolation ; constituting not only the leading article of breakfast and supper, but often of

dinner, and over its placid inspirations their happiest hours seem to be passed.

Although the effects of *Whiskey* might rather be considered under the head of climate and national character, yet they are so closely connected with the present part of our subject, that we must touch upon them now. The great estimation in which spirituous and fermented liquors are held by all northern nations, is a sure proof of their necessity and value. Among these a perpetual struggle between the laws of life *within*, and the laws of nature *without* exists; and whatever will gain a preponderance to the former, will, of course, be eagerly sought after. The farther we approach to the north, the greater devotedness we find to these liquors. Here life and nature are at a very low ebb; artificial excitement becomes indispensable, and the means of obtaining this will be among the chief objects of the people. The Tartar has his Koumiss, the Russian his Schnapps, the Canadian his Brandy, and we have our Whiskey—all are eagerly sought after—all are valuable. That the *use* of this fluid with us is attended with great advantages is unquestionable, but that its *abuse* has completely thrown these advantages into discredit, is equally so. Indeed in the entire mass of misery of our poor, whiskey is thought to form the principal remedy; they conceive it a cure for all complaints, and all weathers; in warm weather it allays their thirst; when cold, it heats them; when wet, it dries them; in sorrow they fly to it as a charm and a blessing, and in its intoxicating draughts their misery



is forgotten. The bad effects, however, resulting from this fluid with us are not, I think, to be ascribed to the quantity consumed. I believe the lower orders in Manchester, Edinburgh, Glasgow, and some of the large manufacturing towns in Great Britain, consume a greater quantity ; but there is a striking difference in the mode of consumption between the two—they do not take it on empty stomachs like our people ; they eat much more solid nourishing food ; thus the effects of the whiskey are less directed to the coats and nerves of the stomach, or to the brain, and therefore intoxication does not exhibit itself so frequently. However, the great proportion of public houses in Dublin compared with others, is a clear proof of the immense consumption of whiskey, and until such is reduced, disease and distress must stalk abroad through our streets.

The effects of poverty, beside those under the head of Diet, and above mentioned, are so numerous, and so mixed up, that it is almost impossible to distinguish and separate them from each other ; in their dwellings, furniture, garments, and every thing about them, these effects are obvious. In like manner, the effects of disease resulting therefrom appear equally abundant and complicated, but certainly *Diet* presents the chief genus. With regard to *quantity*, the whole order of cachexiæ seems chiefly concerned ; of this I have observed dropsical affections to constitute a most predominant class, particularly with females, and ascites

seems to prevail most ; the cases I have met with of it exceed in number those almost of any disease under this head. The general indulgence in weak, watery, enervating liquids ; the habits of indolence of our lower orders ; their love of salt food and whiskey ; and their carelessness and want of nourishing solids easily explain the tendency to this disease, as also to the frequency of visceral obstructions, wasting, emaciations, depraved habits, and that long and melancholy list of nervous derangements connected with worn out constitutions.

Under the head of *quality*, the diet of these poor people appears no less to predispose to disease. Potatoes are the only healthy and nutritious article employed ; fresh meat, garden vegetables, milk, oatmeal, or the combinations of these, may be termed luxuries with them. The articles of diet connected with their diseases may be divided under three heads : *salt food* in general, *tea* and *whiskey* ; although the last cannot be called an article of diet, yet it enters so abundantly into the others, that we cannot well separate its effects.

Their attachment to *salt* and *salt food* is constant ; their dinner is often salt and potatoes, more frequently perhaps salt fish, (particularly herrings), and their drink water. The effects and consequences of all this must be obvious ;\* the blood, de-

\* The digestive organs become impaired in their tone ; the

prived of its red globules and fibrin, and superabounding in serous particles, becomes dissolved and unfit for the purposes of nutrition, and its vessels, weakened and collapsed for want of their healthy distension, become unfit for their offices. The salivary glands, and the mucous membrane of the entire alimentary canal, are perpetually stimulated to pour out their fluids; thus proper moisture and lubrication are prevented, the general mass of fluid is diminished and vitiated, and the whole system becomes dried up, and emaciated. The intestinal canal in particular suffers general torpor, and inability to propel its contents; indeed I have found no symptom so immediately obvious as constipation. and no remedy so directly useful, as purgatives; in cases the most apparently unconnected and remote, I have invariably witnessed their invaluable effects, and I believe Dr. Hamilton has not in the least exaggerated their powers. The various and manifold injuries resulting from a depraved state of the intestinal canal, I have clearly found to correspond with what this writer affirms. Connected with derangements of the alimentary canal, a constant appetite for fluids must be expected, and this, together with some of the causes already mentioned, will easily explain the hydropic tendency so preva-

stomach and liver suffer both in fabric and function; their proper secretion is diminished and vitiated; the lacteals carry an unhealthy chyle, &c.

lent, and the debility resulting therefrom. Next to this the skin is the principal sufferer from the effects of salt food. The cases of obstruction of this organ have been very numerous, as might naturally be expected, although in general they seem rarer than in Scotland. Cutaneous affections I have found the most abundant; indeed a stranger, on his arrival in Dublin, must notice their prevalence with the lower orders in general. Cases of the most severe kind sometimes occur, and must be expected; the diet of the poor is in every way suited to the production of such complaints.

Under the head of *tea*, the effects principally relate to the nervous system, and when added to those already mentioned, produce a most copious class: low nervous fevers, great debility, tremors, palpitations, vertigo, dyspepsia, hypochondriasis, asthma. These are the principal affections I have met with, and females have been chiefly concerned.\* That the adulterations of tea have materially added to this melancholy catalogue I have no doubt whatever.

Under the head of *whiskey*, along with several of the affections above mentioned, the liver and stomach would seem to be the chief sufferers; derangements of the former organ appear to be much more frequent with us than our neighbours, and I

\* Cases of *fluor albus* also have been remarkably abundant, and perhaps we may also rank this under the effects of tea.

think to whiskey it must be chiefly attributed. The dissections at the various hospitals here exhibit, I believe, greater derangement of this organ than almost any other. I have seen it assume various forms of disordered structure, and I have always observed it the most prolific parent of disease. Inflammations, indurations, adhesions, and tubercles, are the general appearances it presents, and I believe it is rarely free from some one of these. Next to the liver the stomach is the chief sufferer by whiskey, and from what has already been mentioned, it might be inferred that the ravages of this fluid would be almost concentrated and confined here. General inflammation, thickening of the coats, induration, scirrhus, &c. are the usual affections exhibited ;\* the brain also, and nervous system, come in for their share of disease, in no small degree, from the effects of this fluid ; inflammation from over excitement, apoplexy, palsy, vertigo, &c.

Such appear to be the general diseases resulting from the diet, &c. of our poor, and such are the cases I have met with in the dispensary. The three heads, under which I have classed them, appear to be the only ones worth mentioning ; but all are so combined and connected with each other that, as be-

\* Dr. M'Culloh, in his late excellent work on the Hebrides, mentions the peculiar prevalence of dyspepsia there ; may it not be attributed chiefly to the great use of whiskey ?

fore mentioned, it becomes difficult to trace the separate relation of cause and effect. The orders of neuroses and cachexiæ are those most prevalent, and unless in spring, or the latter end of winter, or in particular cases, I have been greatly intimidated from using the lancet. Low nervous fevers, diseased liver, stomach, bowels, and skin; palsy, palpitation, apoplexy, dyspepsia, hypochondriasis, asthma, and dropsical affections, in general have been the diseases of adults. Atrophy, rachitis, diseased mesenteric glands, worms, cutaneous eruptions, and hydrocephalus are the general diseases of children. Psora I have seen much more rare than in Scotland, and hydrocephalus more abundant than either in England or Scotland.

Not only is the diet of these poor people thus productive of disease as to *matter*, but even as to *manner*. In the conduct of their meals little or no attention is paid to either system or regularity; the periods between each are mostly accidental; fasting seems a daily exercise with them; they are quite accustomed to it; and from the nature of their food it becomes less painful to them: hunger, therefore, often becomes a morbid appetite; it is either scarcely felt, or it becomes voracious. The stomach, weakened in its powers, and disturbed in its periods of waking and rest, becomes unnaturally excited on the one hand, or collapsed on the other; its nervous power, and with it the whole nervous system, is weakened; chymification and chylification

are deranged, and thus the whole mass of blood becomes vitiated.

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## POPULATION.

From what has just been mentioned, we might fairly conclude that population among the lower orders of Dublin has been, and must be greatly checked, and that the successions of a puny and debilitated offspring have contributed to its decline; the contrary however seems to be the case. Houses are crowded with families, and rooms with children, and the proportion of births to deaths appears to be increasing every year. To judge of the population of a large city, we must explore the oldest and narrowest streets, lanes, and alleys, where the density is the greatest. It is not to the number of houses we should look, but the number of rooms in each house; each of these rooms contains as many persons as a whole house; this I have found to be the case very often, and from this I take my opinions.

Any attempt at a perfect census of Dublin must, for many reasons, be a most difficult task. Dr. Whitelaw is perhaps the only one that has approached to accuracy, but even with all his labours, fatigues, and diligence, he often found his sources imperfect, and not to be relied upon. Notwithstanding the act of 1812 for inquiry into the population of Ireland, we are still in the dark, although we

are aware that its increase has been latterly immense, and no less aware how much this increase has contributed to our distresses.

Dr. Whitelaw estimates the number of inhabited houses in 1798 at 14,854, and reckoning 11,5 to each house, he computes the population at 170,805. Estimating a population by the number of houses is at best a most loose mode, and Dr. Whitelaw seemed quite aware of this; he therefore went much more minutely to work, and in consequence of the then disturbed state of the city from the insurrection, and the necessity of the inhabitants of each house putting their names in lists on the doors, he was enabled to reckon the individuals of each house. In this work, however, he met with so many sources of error, that he found he could not much depend on this mode of computation. That the population of Dublin has increased at a rapid rate since 1798, I believe there cannot be a doubt. The number of houses built since then bears no proportion whatever to this increase, and therefore, in computing the people by the houses, any average we take must be a very wide one; the proportion of 11,5 to each house may answer for the better sorts of streets, but for the inferior it is, I think, now quite too low. Although I have not explored the most populous districts, yet what I have seen is quite enough to shew me this. In a great proportion of the old houses, in the old streets and alleys, &c. there are generally eight or ten rooms in a house, and in each of these rooms, eight or ten human beings are of-



ten crowded together. Cellars also are very numerous and equally crowded, though Dr. Whitelaw does not notice them much. It is from these old parts of the city, and these rooms, &c. that we should chiefly form our opinions ; they probably constitute two-thirds of the entire population, although not one third of the area of Dublin ; and were I to form an average estimate from what I have stated, I would allow twenty for each house : if, therefore, for the good and new streets, &c. we take off six, thus making it fourteen, and allow for the increase since 1798, and we will perhaps allow the entire present population to be near 250,000. Indeed some who have since studied the subject, seem to think this amount rather under-rated.\*

When with this great increase of population we combine the apparent decrease in the means of its subsistence, we see at once the great source of our distresses. The causes of the one are probably nearly those of the other, directly or indirectly, paradoxical as it may appear ; *viz.* the return of peace, the nearly extinct state of manufactures, the decline of trade and wages, and the want of employment of the poor ; added to these, early and improvident marriages, for which the Irish have always been remarkable. Potatoes were always cheap, and women always prolific, and they seem to have a general

\* *October 30th, 1821.* By a census just completed, it appears, that there are in Dublin and its suburbs 20,822 houses, and 238,201 inhabitants. *Editors.*

maxim, that what God created God will provide for ; indeed the mendicant tribe estimate their riches by their children, as affording pretexts for their trade, and claims for charity.

The miseries resulting from this species of overgrown population must, in the production of disease, shew its effects most abundantly ; these effects are nearly the same as those alluded to under the last mentioned head. But along with these, others more immediately arising therefrom, should be noticed. The severity of epidemics in Dublin has often been remarked ; their origin and nuclei have been always traced to the old crowded quarters of the city : here the atmosphere, both in and out of doors, becomes in the highest degree vitiated ; in the rooms, staircases, cellars, &c. ventilation and circulation of air are completely suppressed ; windows generally hermetically sealed down, crowds of beings exchanging the exhalations of each others lungs, and thus diffusing contagion in every shape and direction.

On this subject, however, as before mentioned, it is not the purpose of this paper to treat. The history and progress of fever in this city have been so often and so ably delineated by its Physicians, that I cannot pretend to add any thing further ; nor indeed, in the connection between disease and redundant population, does there appear to

me, beside this, any point of sufficient interest to strike us in our present inquiry.

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### NATIONAL CHARACTER.

The character of the lower orders in Dublin, and indeed of Ireland in general, has been so often described and discussed, that I shall not much dwell upon it here. It is only in its connection with disease that we are to notice it; here its influence is very strong, insomuch that I have thought the subject worthy of a distinct section in this paper. Let us first, however, glance at the moral side of the picture.

*Passion* seems to be the grand and presiding feature in the national character of these people. from this all its peculiarities emanate, and whatever it has of faults or beauties are here to be found; it is their constant guide, and regulates most of their actions. Their principle of *thinking* being so subordinate to that of *feeling*, and their principle of *feeling* being subject to such rapid changes and vicissitudes, we see about them that freedom, lightness, and carelessness, which

makes them happy even in their miseries, because unmindful of them. Sorrow cannot rest upon them long at a time; their constitution is elastic, and soon shakes it off. There is a strong love of life about them, and a love of each other; and although distress and sufferings press in every shape around them, yet this love seems proportionally to increase in the strength of its instinct, and to cling more closely to them: that tedium vitæ, often so conspicuous among our neighbours, is here but rarely observed; suicide is almost unknown, and let their sufferings and privations be ever so crowded on each other, they rise superior to them, or bow with resignation. Universally good natured, careless, warm in heart, hospitable, grateful, and fond of each other; full of words, exaggerations and professions, they ever look at the bright side of life; hope is their companion, and seldom deserts them.

From this character, however, arise the great sources of their sufferings and degradation; they all hold the doctrine of fatalism, they believe that their own exertions are of very little use, and that whatever happens is from an inevitable destiny; to this, therefore, they bow submissively, and with it they are perfectly satisfied. Their temporal concerns being thus interfered with, we must expect to find that total neglect and abandonment, which marks every thing about them. Indolent, prodigal, and careless, they look not to the wants of the morrow; and if they can satisfy the common

cravings of nature they appear contented. Along with all this, we must take into account the peculiar habits and prejudices, which, from their want of education, operate so strongly with these poor people. Among them great sociability is most striking, as can easily be supposed from what has already been mentioned; it is one of their strongest traits of distinction from their English neighbours. The English know little of even their next door neighbours; it is of *self* they are thinking, not of society: it is this selfishness that makes them comfortable, for *comfort* is always connected with self. In Ireland they all know each other and help and love each other, and chat and gossip about their neighbours' affairs, much more than they *think* about their own.

The consequences of this character, as connected with health, are sufficiently obvious; the principal seem to be indolence and dirt. With the lower orders in England there exists a perpetual activity, and a genius for action totally unknown to us; with them there seems to be as great a passion for scouring and cleaning, as with us for dirt and sloth, and let their dwellings be ever so humble and lowly, we see every article of furniture in the best order of neatness and cleanliness. With the French lower orders, although there is not the same appearance of neatness in their dwellings as in those of the English, yet in their persons it is carefully preserved. Why do we

see these people so free from disease? Personal cleanliness, the nature of their diet, and their constant activity and exercise, explain the causes. Climate and soil are the great sources of their health and wealth. They need not, like us, crowd over fires, and indulge in the sedentary habits which we enter into. Seldom exposed to atmospherical severities, there is less struggle as it were in the business of life, and thus they are prevented having recourse to those strong stimuli, which we find necessary and adopt. The principal sources of disease with the lower orders in England and Scotland belong to the digestive organs. Obstructions in the alimentary canal, particularly in the stomach and intestinal division of it, constitute the chief proportion, and next to these the diseases of the liver. Irregularities of diet, both as to quantity and quality, are the chief causes of these diseases; the great proportion of animal food, and the immense consumption of malt and spirituous liquors, have subjected them to a train of complaints, of which our Continental neighbours know little or nothing. In Dublin these irregularities of diet, though differently modified, are equally pernicious, but they do not so much constitute the predominant source of disease, as may appear from what has already been mentioned.

Under the head of want of cleanliness, with reference to individual health, we have chiefly to regard the condition of the skin. This acquires a complete coating, its exhalents are obstructed,

perspiration is prevented and vitiated, and thus one great outlet for the discharge of impurities is closed ; the proper healthy balance of circulation is destroyed, the internal organs are oppressed, and the whole machine deranged ; thus we cannot wonder that cutaneous affections should form so large a proportion of disease with the Irish poor.

Under this head, with reference to collective health, we cannot wonder at the rapidity with which contagion often spreads. Both in and out of doors it seems facilitated in every way ; within doors, every article of furniture and wearing apparel is disfigured with filth ; every spot seems encrusted with its layers, and the foulest odours abound every where ; out of doors, at least in warm seasons, our church-yards, slaughter-houses, and the masses of filth and offal with which our streets and lanes are disgraced, contribute no less to the propagation of contagion. In the larger and better streets, the cleansing is very well attended to, but in the narrow and crowded ones, where the necessity of its removal is infinitely greater, the heaps of filth are truly disgraceful. In some of my visits, I have been obliged to wade through masses of filth enough to sicken the stoutest and strongest—masses which have remained undisturbed for months, perhaps for years, and thus generating the most putrid effluvia. In London, even in the most narrow and crowded lanes and alleys, we never see such dépôts of filth, although the population be equally dense. Not merely does this

arise from the habitual cleanliness of the English people, but from a much stronger principle, interest. The intrinsic value of dirt there, like every thing else, is well known ; a better manure than street dirt can scarcely be found, and it is always sure to bring its price at market. Ought not similar reasons to operate with us, and ought not our Paving and Cleansing Board to be more alive at least to their *own interest*, if they are not more so to *our health*. We know that vegetables are very dear in our markets, Why ? Because our gardens are not sufficiently manured ; this manure lies in our lanes and alleys, and only wants collecting ; but what would this be, compared to the benefits from the purification of our atmosphere, which its removal would produce ?

In noticing the effects of dirt, and its influence in the propagation of contagion and disease amongst our lower orders, it is impossible not to observe the incalculable advantages which the Mendicity Society has afforded. Perhaps Dublin has not received so decided an advantage those many years. To remove the lowest orders, their rags and wretchedness from the other and less forlorn classes, is cutting off the foulest part of a sore, and thus promoting the healing up of the less diseased part ; yet the next rank presents nearly as much wretchedness, and demands much more attention. Their sufferings are private and unobtrusive ; they are poor room-keepers, and nothing but pride prevents them enlisting in the ranks of mendicity. They are the immediate ob-



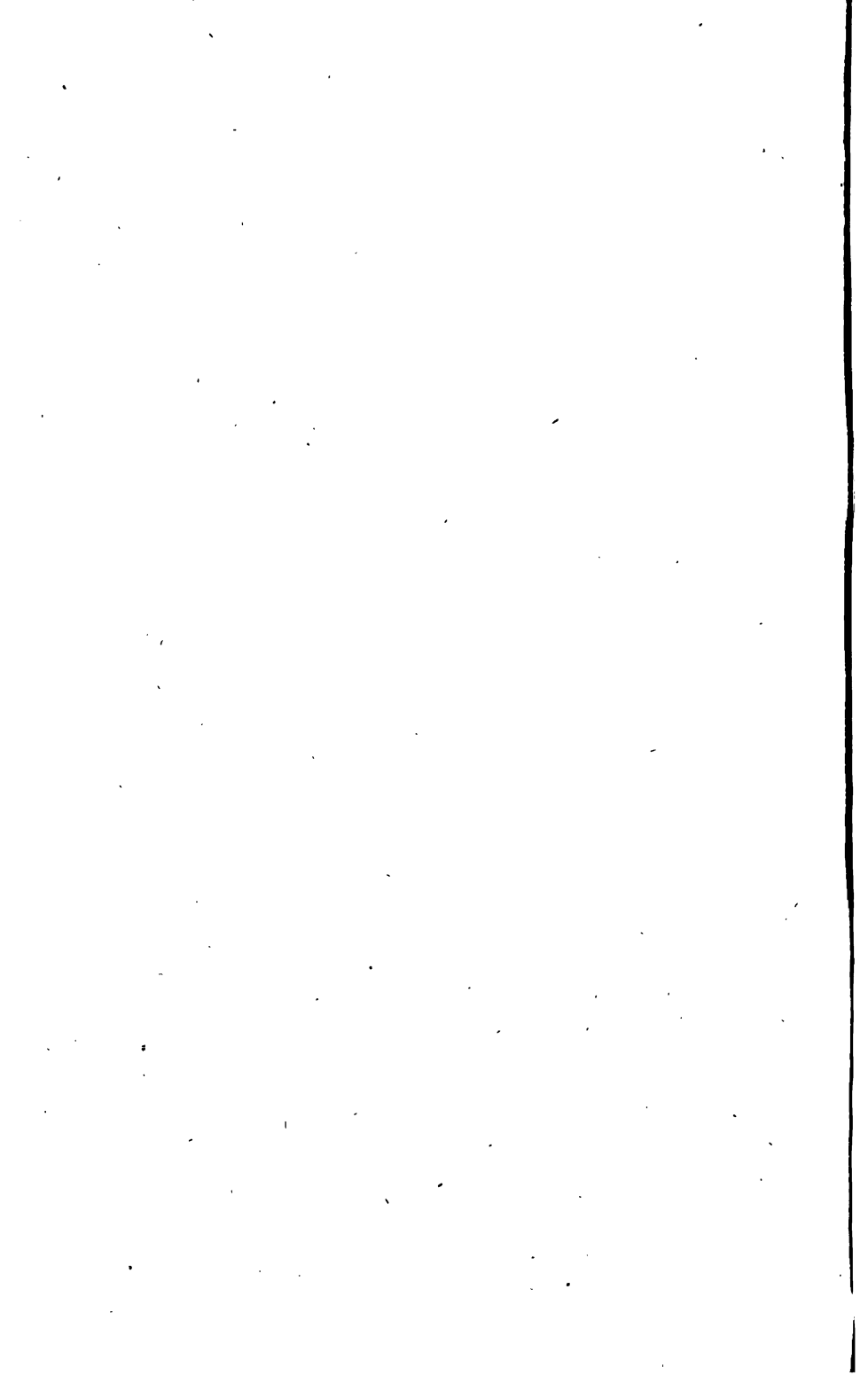
jects of Dispensary notice ; they are the true samples from which we are to take our estimates of the condition of our people, and unless something is done to mitigate their sufferings, misery and distress must frightfully increase with us.

**PART II.**

**MISCELLANEOUS COMMUNICATIONS**

**ON**

***MEDICAL AND SURGICAL DISEASES.***



# FATAL CONSEQUENCES

RESULTING FROM

## SLIGHT WOUNDS

RECEIVED IN

## DISSECTION.

BY A. COLLES, M. D.

ONE OF THE PROFESSORS OF ANATOMY AND SURGERY IN THE  
ROYAL COLLEGE OF SURGEONS IN IRELAND.

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### CASE I.

ON Monday, December 1st, 1818, Mr. William Hutchinson, one of my pupils, of rather a delicate constitution, received a slight scratch of the knife on the outer side of the first phalanx of the right thumb, on opening the body of a man who had died of cynanche laryngea in Dr. Steevens's Hospital. The cellular membrane on the external surface of the larynx and pharynx contained that amber-coloured fluid, resembling melted jelly, which is so often met with in such as have been carried off by

this disease. The wound was not more than one-sixth of an inch in length, and so superficial that he took scarcely any notice of it at that time.

In the evening of this day he was drowsy, and retired to bed earlier than usual; the next morning he complained of head-ach, sick stomach, and of a most acute pain in the right shoulder and axilla. In the course of the day these symptoms became so severe, that he was desired to take an emetic, which after a short interval was followed by a purgative medicine.

On the third day the pain had increased in an extraordinary degree; it was confined to the shoulder joint; there was no discoloration of the integuments, but there was some swelling about the joint and above the clavicle; he suffered no uneasiness in the elbow joint; no inflamed lymphatic vessels could be traced along the arm, nor could any enlargement of the glands be discovered either in the axilla or above the clavicle, but he suffered exquisite pain in both these places from the slight pressure necessary in making the examination. The scratch on his thumb was at this time quite free from inflammation, the cuticle was raised into a small flattened vesicle, and was about half filled with a very white milky fluid.

In this state he continued for three or four days, suffering the most agonizing pain, and labouring under a violent fever, accompanied with the greatest dejection of spirits.

Fomentations were applied, but without relief. Leeches in the axilla and cold washes were also tried, but with no better success. Large doses of opium failed to procure the slightest mitigation of pain, and the fever was not in the smallest degree controlled by the usual remedies.

He now at length had some relief from the severe pain in the shoulder, but this was not accompanied by a corresponding remission of the fever. In the course however of a day or two he, for the first time, complained of a pain along the right side of the thorax. A diffused erysipelatous redness was seen extending from the axilla nearly half way down to the ileum; and although a fulness appeared on the ribs, yet nothing like a phlegmon could be discovered. In a day or two more this redness had extended down that side as low as the great trochanter, and could be traced across the abdominal muscles to the groin; the skin had a doughy feel, and easily received the impression of the finger. In some places the surface presented to the eye the appearance of distinct vesicles, yet these spots, when examined by the finger, felt perfectly solid; in fact they resembled accurately those elevations which are observed in the site of leech bites long healed, when the skin, to which the leeches had been applied, becomes swollen by inflammation. The fever continued unabated, and his strength seemed nearly exhausted, and was supported only by large quantities of wine. In this extremity, on the 15th of December, an incision was made over the 4th and 5th

ribs, in the hope of finding some lymph or matter diffused through the cellular substance, but none was discovered. Neither the local inflammation, nor the febrile symptoms, seemed at all influenced by this incision. In a few days more the inflammation ceased to extend, the cuticle began to desquamate, and the pain to diminish; the skin, which had been affected, still retained its morbid feel. At the termination of three weeks after the accident he was suffering no pain in his side, the shoulder had long since ceased to trouble him, the cicatrix in the thumb could scarcely be observed, and his general health was gradually recovering; yet at this time he began to experience pain in the arm, along the inner edge of the biceps muscle; this was but slight for a day or two; it soon, however, became very violent. There was a considerable degree of induration along the biceps, which extended even to the pectoralis and latissimus dorsi; the arm became red, swollen, and oedematous; the swelling extended below the elbow; the pain, which at all times was exceedingly great, was rendered almost insupportable by any movement of the arm. Fomentations and poultices were applied, and a fluctuation being obscurely felt along the inner edge of the biceps, an opening was made on the 1st of January, which gave exit to a small quantity of matter. In a few days after the abscess in the arm was opened, a fresh attack of inflammation took place in his side, which ended in the formation of another abscess, situate over the 6th rib, and not very far from the spine. After this

period he rapidly improved, so that in the latter end of January he was able to go to the country.

On the 14th of February (when he had been three weeks in the country) the abscesses were healed, the hardness along the biceps was greatly diminished; but even then he could not make any use of the arm; the integuments along the side had regained, in a considerable degree, their natural feel. His general health was wonderfully improved. He did not regain the full use of the arm for some weeks after this; the induration of the integuments of the side was also very slow in dispersing.

From the commencement of the disease his spirits were sunk; he frequently raved; his pulse throughout was never less than 120, and sometimes it was 130. His stomach was, at the commencement, very irritable, and got better; but it again became alarmingly irritable about the beginning of January. This might have been partly caused by the large quantity of opium he used, for he could not procure any relief, except by a large dose, amounting to a drachm, or four scruples of the tincture daily.



## CASE II.

On Saturday, February 13th, 1819, Mr. Dease, late Professor of Anatomy and Surgery to the Royal College of Surgeons in Ireland, lectured on the cervical nerves and brachial plexus. The subject, (which was dissected for him) a female about forty years of age, had died in one of the Hospitals of a chronic pulmonary affection ; the body had not been buried, and was nearly fresh, for she had not been dead above 48 hours.

On the morning of Friday, when she had been just brought into the College from the Hospital, I saw the thorax opened by Mr. Shekelton, who called my attention to a brown thick fluid contained in the pericardium. The lecture was delivered at one o'clock on Saturday by Mr. Dease, and on Sunday morning early he awoke with a violent shivering, and sickness of stomach ; the former was very severe, and the latter continued for upwards of two hours. He threw up his dinner, consisting of fish, of which he had eaten very freely, and afterwards he vomited a large quantity of bile. Even at this time, he complained of acute pain in his left shoulder. His friend Dr. Sheridan saw him early this morning.


He sent for me at half past eleven o'clock, and earnestly besought me to bleed him for this pain of the shoulder, which he described as very severe, and as aggravated by the slightest attempt to move the arm. I found him at this time labouring as I supposed under high symptoms of the prevailing fever, and conceiving that his complaints of the arm were in some measure the effects of impatience, I declined bleeding him unless by the desire of his physician. At 3 o'clock, P. M. I again saw him, and although I still was of opinion, that he was affected with common fever, attended with derangement of the stomach and liver, greater than ordinary, yet I could no longer resist his importunate solicitation to be blooded, and I took away nearly twenty ounces of blood from his arm by a large orifice; the blood flowed freely. He thought himself relieved of the pain in the shoulder while the first cup was filling, but this was probably ideal, as he did not express relief towards the conclusion of the operation, and as I found his pain not at all mitigated at 9 o'clock P. M. when the fever was as high as it had been at any time of the day. The blood was neither buffed nor cupped, and the proportion of serum was considerable. I now observed a slight fulness above the clavicle, along the left side of the neck, in the space between the sterno-mastoid and trapezius muscles, and being in doubt whether this apparent fulness might not be owing to the position of the head, which was held rather towards this side, I wished to satisfy myself by the touch, but on applying my

finger even with the slightest pressure, he complained of exquisite pain.

Monday morning, February 15th. I was called upon at 8 o'clock this morning to see him, and found that he had spent a very restless night, owing to the pain of his shoulder, and when I went into the room he had the entire of the joint covered with leeches, to the amount perhaps of 100. We advised a draught with elect. scam. fomentations, and opiate-liniment. At 5 o'clock, P. M. we met again, Dr. Sheridan, Dr. Brooke, Mr. Richards, and myself. We learned that the draught was rejected, almost as soon as it had reached the stomach, and although the pills had brought away some liquid stools, yet the fulness of the abdomen remained unreduced. No relief has been derived from the fomentations and liniment. Repeat the pills, and assist their operation by enemata.

Tuesday morning, 16th. Bowels have been more satisfactorily freed; symptoms however remain as yesterday. We felt at a loss to account for the pain of the shoulder, which however was less severe. We advised him to persevere in the use of purgatives, giving him the *inf. sennæ et tamarind*, with *tinct. jalapæ*.


9 o'clock, P. M. On visiting him this evening he accidentally mentioned an uneasiness, which he felt in his left side. On examination I discovered a colourless swelling on the side of the thorax, a little behind, and below the posterior border of the axilla; upon which the recollection of Hutchinson's

case at once occurred to my mind. On my suggesting to him my suspicions of the cause of his sufferings, Mr. D. denied his having received any cut, of which he was so positive as almost to refuse to let me examine his hand. I discovered on the dorsum, rather towards the ulnar side of the second joint of the thumb, the mark of a slight scratch, not one-fourth of an inch long; this formed the diameter of a vesicle, which was almost half filled with a fluid of a milky whiteness and consistence, and about this size 

I should have observed that the pain of his shoulder was better on Monday night and Tuesday morning, so that he was not (as on Sunday and Monday morning) fixed to one spot, but he could now lie with his body slightly turned towards the right side, and could raise himself in the bed, by pulling, with the left hand, a cloth tied to the foot post. The skin above the clavicle, at this time, bore pressure very well; the skin at the swollen part of the side was not discolored, but was possessed of the most painful sensibility to the touch. It should be observed, that every evening, about 6 o'clock, he had an exacerbation of restlessness and depression of spirits.

Wednesday, February 17th. This morning we resolved to give a bolus of calomel, with a liquid purgative, and at night a draught with 25 drops of laudanum.

Thursday, February 18th. The discharges from the bowels in the course of yesterday were very free and natural. He slept for four hours after taking the draught, and awoke cheerful and refreshed. He was directed to take a bolus of carbonate of ammonia, together with some diaphoretic medicine, also to foment the side, and rub it gently with a liniment of camphorated oil and aqua ammoniæ. Draught to be repeated at night with 40 drops of laudanum.

Friday, February 19th. Had a very bad night; some delirium this morning, but is now, at half-past eleven o'clock, more composed. Face with a yellow tinge; countenance sharp, yet not indicative of much pain or inward distress; pulse smaller. He desired me to look at the right arm, which had been blooded. I found the incision inflamed in the ordinary way; but I remarked on the forearm, about two inches below the incision, a small vesicle  containing a fluid like that produced by the original wound on the thumb.

N. B. This vesicle did not increase in size, or alter in any way, until the time of Mr. Dease's death.

Saturday, February 20th, 1819. At our visit this morning (11 o'clock) we observed his manner quick, and bordering on delirium. Pulse 126, and smaller. The entire side, from a very little below the axilla, down to the hip, was swelled.

This day we observed the swollen part studded pretty thickly with small elevations, to the eye like vesicles, yet hard to the touch. They bore a resemblance to the elevations which arise in the cicatrices of a part which had been scarified, when it is affected with swelling.

An erysipelatous blush, which had been first observed on Thursday, and had rather increased on Friday, was now more strong, but occupied only a small portion in the middle of the swelled side. Tongue covered with a white coating; countenance less yellow than yesterday, but still contracted and small; abdomen full.

Saturday evening, 9 o'clock. Delirium set in soon after our visit, and has continued high; perspiration warm, and rather general; however the left side of the trunk of the body, where the clothes lightly cover him, is quite dry, though warm; pulse weaker; the swelling has passed more from the abdomen towards the back; erysipelatous redness more extended and more strong, occupying a considerable portion of the side; bowels free. Although the perspiration is warm, while he remains covered, yet if his hand remain uncovered for a few minutes, it feels cold and clammy.

Sunday morning, February 21st, 9 o'clock, A. M. At ten o'clock last night he took *Tinct. Opii gutt. xl*, but the delirium continued for three hours after it; he insisted on being moved to an adjoining bed, and


there he lay for nearly three hours, without any clothes. On being again laid in his own bed, he was stupid, and his left leg was stiff; countenance still sharp, but not yellow; lips of a good red; he has clammy sweats on the head and upper parts of the body; frequent deep inspirations, like sighing; pulse 126, and weak. Wine negus, with nutmeg.

12 o'clock. General state as at 9. Inflammation of the side extends up to the axilla; and on the posterior edge of the axilla appears as if there was an abscess, but is without fluctuation; color of the inflamed part darker; he has passed no urine since 9 o'clock last night, although he had an enema this morning. We advised a poultice to the side, a bolus of scammony, calomel and jalap, and cordial draughts every two hours. We now observed a swelling on the anterior part of the right arm, occupying about a handsbreadth of the belly of the flexor muscles, beginning about an inch and a half below the orifice made in bleeding him. The vesicle on this arm remains as when first observed: a poultice to this swelling.

5 o'clock, P. M. We agreed to puncture this tumor, although he appeared approaching fast to dissolution. A quantity of serous fluid, nearly a tea spoonful, flowed from the opening, but did not, in the slightest degree, reduce the swelling.

Sunday evening, 9 o'clock. Pulse in right wrist not to be felt; heat of limbs not reduced; breath-

ing quick, and laboured. He passed urine at five o'clock this evening, and at ten o'clock he died.

Monday morning. I was called early this morning to examine his body, as one of his pupils, who remained in the room, fancied that he heard him breathing. I now observed that two or three vesicles of this size  had formed on his back; the swelling had extended down the thigh; the left arm was swelled, and rather hardened from the elbow nearly up to the shoulder; this swelling was chiefly along its anterior surface, but it could also be felt all around, yet there was no redness or vesication on the limb.

Along the left side of the trunk the raised hard spots still continued as in life.

It is not irrelevant to mention here the outlines of Mr. Egan's case. Mr. Egan had, on Saturday 13th February, after Mr. Dease's lecture, employed himself in dissecting a part of the same subject. On Sunday evening he had a rigor, followed by febrile paroxysm. On Monday he felt himself not well, yet he went into company, and danced in the evening. On Tuesday he complained of hoarseness; inflammation attacked the metacarpal joint of the thumb, accompanied with pain and erysipelatous redness around it, the pains passing up along the back of the fore arm. This was attended with a smart degree of fever. On Friday he complained of ten-



derness under the border of the pectoral muscle, and a gland could be felt enlarged under the edge of this muscle. He had no perspiration in this febrile state, and his chest appeared to be seriously affected. This affection commenced on Tuesday.

On Sunday, February 28th, I saw him. Fever very high ; pulmonary affection and distress very severe. An abscess, which had been collecting for some days in the axilla, now appeared to me fit to be opened, although there was no redness of the skin, no pointing, no surrounding hardness ; the matter discharged was purulent, of an unusually thick consistence, and the cavity proved to be very extensive, passing across from the pectoral to the latissimus dorsi muscle.

N. B.—This night he had retention of urine, probably owing to an opiate draught ; he had no recurrence of this distress. He gradually recovered.

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### REFLECTIONS.

I have been thus minute in relating the circumstances of these two cases, because I consider them as presenting us with the character of a disease, both formidable and new.

The severe pain felt on the point of the shoulder ;

the peculiar colourless swelling, or fulness above the clavicle, within a few hours after the infliction of the wound; the wound itself at this time free from inflammation or pain; no red streaks, no pain, nor even tenderness on pressure through the whole course of the limb. In short, no trace at the time of any morbid connection between the wound and the seat of the pain, were the most remarkable features of this disease.

Another remarkable feature was the very peculiar appearance of the pustules, (unlike to any I had ever witnessed) and the striking resemblance of the pustules to each other. Add to this the appearance of a similar pustule on the forearm of Mr. Dease, observed on Friday, the 19th. The character of this pustule could not have been influenced by the wound of the lancet, for that wound had only the ordinary appearances observed in cases where a slight inflammation supervenes on blood-letting; besides, this pustule was seated lower down on the limb, and the skin intervening between it and the wound remained perfectly natural, free from discoloration, swelling, or pain. The elevations of the cuticle to the eye resembling vesications, while actually solid; and the swelling on the forearm, which was opened on Sunday, only a few hours before Mr. Dease's death, present characters which tend still further to remove the resemblance of this to any other disease usually consequent on wounds.

The description of the swelling, passing from the

axilla along the side down to the hip, and being accompanied with redness, may induce some to consider these two cases merely as instances of erysipelatous inflammation. But to such I would beg leave to observe, that the redness was of a bright healthy colour, did not appear until the fourth day, and at no period did the redness occupy more than one-sixth of the swollen part. So very unlike were the characters of this disease to those of erysipelas, that the late Mr. Richards could not be persuaded to believe that there existed any connection between the wound and the disease, until I brought with me Mr. Kinchela, (a very intelligent pupil, who had kindly attended Mr. Hutchinson) and who, on seeing the peculiar swelling along the side of the thorax, instantly pronounced this to be the same disease as Hutchinson's. It should be observed, that erysipelatous redness, though more considerable in Mr. Hutchinson's case, never occupied more than one half of the swollen surface. The inflammation seizing on the arm in three weeks after the receipt of the wound in Mr. Hutchinson's case, and in eight days in the case of Professor Dease, presents another striking point of resemblance.

In whatever way the question of the nosological arrangement of this disease is disposed of, this much is obvious, that neither habits of dissection the most lengthened, nor a state of the subject the most free from putrefaction, can secure the anatomist from the danger of this formidable disease. For upwards of twenty years was Mr. Dease, during the

winter months, in the habit of dissecting human bodies. If my recollection serve me, I have found most of the instances of inflammation and fever following wounds received in dissection, among those pupils who have arrived at the third season of their anatomical pursuits.

It is an opinion universally held by the public, and pretty generally received by professional persons, that the danger from wounds in dissection is in proportion to the putrefaction of the subject, or to the contagious nature of the disease which had caused death. On the contrary, according to my observation, unpleasant consequences have been so rare, where the subject was far advanced in putrefaction, as to induce me to think that putrefaction rather gives protection to the anatomist ; nor could I trace any connection between the disorder in question, and the contagious nature of the disease which had destroyed the subject of dissection, and surely during the winters of 1818-19, when fever raged so extensively in Dublin, we should have had some striking instances of such a connection had it existed. Perhaps the majority of the affections in question have occurred in cases of examination of bodies to ascertain the cause of death, and where the body had not even been interred.

According to the paper contained in *Hist. de l'Academie Royal des Sciences de Paris, Année 1776, p. 53.* the infection from animal matter, under peculiar circumstances, is more dangerous when com-

delay which must be occasioned by applying caustic to every little scratch, will prevent this plan from being as generally followed as it should be, or as the safety of individuals require.

I would therefore recommend that each dissecting table be furnished with a cup of oleum terebinthinæ, into which the anatomist should plunge his finger the moment it is wounded. The smart which this produces is so inconsiderable, that it will not cause any serious delay, while the irritation may counteract the power of infection, or alter the mode of inflammation in the wound.

ON THE  
**APPLICATION OF LEECHES**

TO,  
**INTERNAL SURFACES.**

BY  
**PHILIP CRAMPTON, M. D. F. R. S.**

**SURGEON IN ORDINARY TO THE KING,  
SURGEON GENERAL TO THE ARMY AND FORCES IN IRELAND, &c.**

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**WHATEVER** opinion may be entertained with respect to the proximate cause of inflammation, it seems to be generally admitted that local blood-letting and counter-irritants are among the most effectual means which art supplies for the relief of local inflammation.

The very terms "*local* blood-letting," and "*counter-irritants*," would seem to imply that it is the intention that the blood should be drawn

from the part, or (to speak with more pathological correctness) *directly* from the tissue, which is the seat of the inflammation, and that the irritation should be excited in a tissue, both different and remote from that which is the seat of the morbid action.

I am not, however, acquainted with any instance in which this principle is rigorously acted upon. The application of leeches to the skin of the eyelids, and of blisters to the temples, for the relief of inflammation of the conjunctiva, is plainly a violation of it, both with respect to the bleeding and the blistering; since the blood is not drawn *directly* from the tissue, which is the seat of the inflammation, and the blister is applied so near to it that the irritation which it excites not unfrequently extends to the diseased part, where it acts as a *direct*, instead of a *counter* irritant.

Having in many instances observed how little impression is made upon the inflamed and turgid vessels of the conjunctiva, by the application of leeches, even in very great numbers, to the eyelids or temples, and that when applied to the eyelids in particular they frequently excited a very troublesome erysipelatous affection, I was led to try the effect of applying a single leech to the inflamed conjunctiva itself, where it covers the lower eyelid. The result exceeded my most sanguine expectation, as a chronic inflammation of the eye, which had subsisted for many weeks, was immediately relieved,

and by a second application was, in two or three days, completely removed. The successful issue of this experiment led me gradually to extend the practice to every case of inflammation of the conjunctiva; and I can now with confidence recommend this practice as affording the most powerful means of which we are possessed of subduing inflammation of the eye, whether chronic or acute, and whether affecting the conjunctiva or the more interior parts of the organ. I could, if it were necessary, substantiate this statement by numerous cases. I trust, however, that it will be sufficient to state, that the practice is now very generally adopted in this city, and that the several highly respectable apothecaries, who are in the habit of applying leeches by my direction to the conjunctiva, can bear testimony to the superior advantages which this practice possesses over the ordinary mode of applying them in inflammation of the eyes. I am induced to add the subjoined abstract account of the ophthalmic cases received into the Royal Military Infirmary during the last seven years, as it comes strictly within the scope of an "hospital report," and affords perhaps the best testimony that can be adduced of the safety and efficacy of the practice which I have ventured to recommend.



*Abstract account of the number of ophthalmic patients received into the Royal Military Infirmary, Phœnix Park, Dublin, with the manner in which they have been disposed of, from the period commencing the 1st of May 1814, and ending the 1st of May 1821.*

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Admitted during the above period . . . . 2074

Blind when admitted, but accommodated in the hospital until examined by the Board at Kilmainham . . . . 5

Passed for pension, in consequence of lost or impaired vision . . . . 9

Sent cured to their respective regiments . . . . . 2060  
 ——— 2074

(Signed) WM. NEWTON, Steward.

In a large majority of these cases, (which included every kind and degree of inflammation of the eye) leeches were repeatedly applied to the conjunctiva, under the direction of that most zealous and efficient medical officer, Staff Surgeon Stringer; and I can distinctly state, that not only in no instance was the practice attended with any inconvenience, but that in by far the greater number of cases, the application of one, or at the utmost two leeches to the conjunctiva, had a more decisive effect in unloading the inflamed and turgid vessels of that

membrane, than the application of five times that number to the temple and eyelids.

It is scarcely necessary to observe, that the application of leeches to the conjunctiva should never be considered as superseding the use of the other active measures which are so essential towards reducing acute inflammation of the eye.

In an economical point of view the advantages of this practice must be apparent, for in public, and too often in private practice, the high price of leeches presents an insuperable obstacle to their sufficient employment.

With respect to the manner of applying leeches to the conjunctiva, nothing can be more simple. The patient should be placed with his back to the light, in order that the lower eyelid may be everted without exciting pain ; a leech or two, rather below than above the middle size, should be allowed to fix upon that part of the inflamed membrane, which covers the tarsus, taking care that it fastens neither upon the ciliary margin, nor upon the eye itself.\* The leech fixes and fills himself in this situation much more quickly than upon a cuticular surface, and this observation is equally true with respect to

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\* In several instances I have, (from inattention upon the part of the operator,) seen the leech fix upon the conjunctiva which covers the sclerotica, but this was attended with no other inconvenience than a temporary ecchymosis.

all internal surfaces, for which I have observed that leeches have the strongest appency.\*

Encouraged by the success attendant upon the application of leeches to the internal surface of the eyelid, I was led to extend the principle to a surface more difficult of access than the conjunctiva, and for the relief of a disease of a much more formidable character than ophthalmia.

All medical men must have observed with how little effect leeches and blisters are applied to the external fauces for the relief of the suppurating sore throat (*cynanche tonsillaris*). In fact, many of those who are subject to frequent attacks of this most painful and sometimes dangerous malady, having observed that all attempts to discuss the inflammation by means of local and general blood letting, blisters and purgatives, are attended with no better effect than the prolonging of their sufferings, by postponing the process of suppuration, have left the disease to its course, and awaited, with whatever patience they might command, the natural issue of the disorder.

I was induced, a few years since, in the case of a young person in whom I took a very particular in-

\* In Egypt and in the Balearic islands those who drink of the stagnant waters are subject to great inconvenience and even danger, from a small leech, which attaching itself to the internal fauces, continues to suck blood, until, from the size of a horse hair, it acquires the dimensions of a common leech. See Larrey, vol. i. p. 358.

terest, to try what effect would be produced in this disease by applying leeches to the inflamed tonsils, at the commencement of the inflammation. The attempt was attended with fewer difficulties than I could have anticipated, and succeeded beyond my most sanguine expectation. A single thread of silk was passed *through* the body of the leech, at about its lower third, the ligature being made fast to the finger of the operator, the leech (held securely between the fore-finger and thumb) was introduced into the mouth, and its head, directed by a probe, was brought in contact with the inflamed tonsil. The animal fixed itself to the part in an instant, and, in less than five minutes, being gorged with blood, it fell upon the tongue, and was withdrawn. The relief was immediate. The tonsil continued to bleed for three or four hours. On the following day the inflammation had greatly abated, and in a few days the tumor had completely subsided without supuration.

In the month of September, 1819, I was called to see Mr. L. who had been suffering for sixteen hours under an attack of cynanche tonsillaris, the second which he had experienced within the last month. The tonsils, naturally large, were now in contact, in consequence of the enlargement of the left one. The inflammation extended to the velum and uvula, the latter of which was œdematous: he complained much of his head and neck, and there was a considerable degree of symptomatic fever. Two leeches were directed to be applied to the inflamed

tonsil and velum ; an emetic to be taken after the leeches had fallen off; and in the evening a bolus with calomel and rhubarb. The leeches were applied by Mr. Moore of Anne-street, who reported to me that they had procured immediate relief. On the following day Mr. L. was able to leave his room, and in a few days the swelling of the tonsils had completely subsided without suppuration. I could report many similar cases, but I think it sufficient to state, in general, that in no instance in which leeches have been applied to the tonsils, within the first twelve hours of the attack of inflammation, has the disease proceeded to suppuration.

When scarlatina anginosa was epidemic in this city in the spring of 1820, I had many opportunities of witnessing the great relief which was obtained by the application of leeches to the tonsils, when the inflammation of the mucous membrane ran high, and I can therefore state with confidence, that local blood-letting in *this way*, when early employed, affords one of the most powerful means of which we are possessed of relieving the most distressing symptoms of this dangerous disease.

In affections of the head connected with an undue determination of blood to the brain, or with the suppression of an habitual epistaxis, the greatest relief is frequently obtained by the application of leeches to the internal surface of the nostrils. This practice which is so generally adopted on the continent has not I apprehend in this country met with all the attention which it deserves.

# DISSECTIONS

OF

## *ANEURISM,*

By JOHN SHEKELTON.

MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND,  
AND ONE OF THE DEMONSTRATORS OF ANATOMY  
IN THE SCHOOL OF SURGERY, &c.

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**T**HERE can be no doubt but that every fact which tends to elucidate the changes produced in an organ by disease, will contribute towards the improvement of the healing art; and as few facts appear to me more interesting than those in which the structure of arteries is concerned, I am induced to publish the following dissections of aneurism in which that disease assumed a novel form.

We are indebted to Dr. Hunter\* for the discovery and explanation of those varieties of aneurism, in which the opening of the artery communicates with that of the vein, either immediately or through

\* Med. Obs. and Inq. vol. 1 and 2.

the intervention of a sac ; thus forming the varicose aneurism, or the aneurismal varix.

Two instances have occurred in my dissections, in which the aneurismal sac communicated with its own artery by a distinct opening at some distance from the regular opening of the artery into the sac, and thus two channels for the blood into the artery beyond the aneurism were established ; the one through the canal of the artery as in common aneurism, the other through the sac.

The first of these instances occurred in the abdominal aorta of a middle aged woman, nearly three inches above its bifurcation into the iliac trunks. The aneurism formed an oblong tumor, more than four inches in length, perfectly circumscribed, and not more intimately adherent to any of the surrounding parts than the artery is in the natural state ; its walls were firm throughout and equally thick as those of the aorta. After detaching it and the contiguous large vessels from their connexions, the aneurism appeared to be a mere dilatation of the aorta, extending from that vessel to the primitive iliac arteries at a little distance from their commencement, where it gradually terminated.

The aneurism was opened by an incision commenced on the fore part of the aorta, and continued through the entire length of the sac, which extended on both sides into the iliac arteries ;\* a

clot of blood, such as frequently exists in the aorta and heart of old subjects having been removed, the interior of the sac was found perfectly smooth ; the canal of the aorta led directly into the tumor above, with the walls of which its coats appeared to be continuous ; the lower portion of the sac, extending itself on both the common iliac trunks, communicated with them by an aperture into each, equal to the caliber of the femoral artery.\* So far it corresponded, in some degree, with the appearances of an aneurism by dilatation ; but from the posterior part, where the aorta enters the sac, there ran behind the aneurism, and only separated from its cavity by the wall of the sac, a canal,† which continuing as far as the bifurcation of the aorta, was divided into two branches, one passing on either side ; these, after descending nearly three inches on the right side, and about half that length on the left, opened into, or more properly were continuous with, the common iliac vessels. The diameter of these canals was nearly equal to that of the aorta and iliacs, of which they were the original trunks, but they were very much flattened, in consequence of their being compressed by the tumor.

The aorta did not open by a circular aperture on its fore part into the aneurism, but communicated with the superior extremity of the sac by a straight and direct passage ; the aperture, in the posterior part of the sac led into the compressed

\* Plate 1. G. G.

† Plate 2.



portion of the aorta : the circumference of this opening was smooth, and the edge of it was rounded off into the walls of the sac, except at the lower part, where it was thin and prominent. The lining membrane presented the same appearance in the aorta, the sac, and in the iliac vessels, exhibiting in all these, small patches of whitish lymph, or, if we may so term it, atheromatous matter ; the cellular coat of the sac was dense, and the middle tissue, which appeared to be of the same thickness as the elastic coat of the aorta, was composed of a number of fibrous laminae, similar to those of the artery, except that in the former the direction of the fibres was irregular,\*

## DISSECTION II.

Of the history of the case in this instance, as of that in the former, I regret I could not get any satisfactory account, but I am inclined to believe that no remarkable symptoms were connected with either, as no organic derangement appeared in any of the contiguous parts.

The subject was a middle aged woman, whose death seemed to have been occasioned by a tuberculated condition of the lungs. In the dissection of

\* From this description it would appear that the blood of the lower extremities must have been transmitted partly through the aneurismal sac, and partly through that portion of the aorta and common iliaes, which was situated behind the sac.

the abdominal contents I found a tumor occupying the extent of the left primitive iliac artery, nearly of the size and shape of that already described, nor was its adhesion to the surrounding parts more intimate than in the natural state of the artery. I removed the entire of the abdominal aorta, and along with it the iliac trunks, internal and external, of both sides ; on detaching the soft parts from these vessels, the tumor appeared to be a mere dilatation of the common iliac trunk, so perfectly was it circumscribed, and its cellular investment so smoothly continuous with that of the aorta and secondary iliac arteries.

I cut open the aorta and primitive iliacs ;\* on the left side two large apertures, nearly equal in size, led off from the forking of the aorta into two canals, which were separated from each other merely by a partition common to both, and were continued as far as the bifurcation of the left iliac vessel ; the anterior and external canal † proved to be an aneurismal tumor, communicating with the aorta by a circular aperture, ‡ smooth and defined ; this tumor enlarged towards the centre to about two inches in diameter, gradually diminished at its other extremity, and terminated in the external iliac trunk by two apertures, which were separated from each other by a little transverse band. The combined size of these apertures might have admitted nearly as much blood as that of an iliac artery

\* Plate 3.

† Plate 3. G.

‡ Plate 3. J.

of ordinary caliber, but the vessel in this case was a little larger than usual; the other aperture from the aorta passed into a canal,\* which was applied to the internal and posterior side of the tumor: this canal was the common iliac trunk whose sides were flattened by the pressure of the tumor from before, but in no way obliterated. The orifice of this vessel from the aorta was completely turned aside, and its continuation with the external iliac vessel was so much diminished, that it was not more than one third of its usual size; but that into the internal iliac was nearly natural.

The walls of the tumor were thick and firm, and its cellular coat remarkably dense and strong; the inner surface of the sac consisted of a thick layer of lymph, which, over the greater part, particularly towards the apertures, was so smooth, that but little difference existed between it and the inner surface of the artery. Between this layer of lymph and the cellular coat was some curdy, or atheromatous matter, which was intimately blended with the former, and becoming gradually more solid and reddish, assumed somewhat the appearance of the middle coat of arteries when tinged with blood. To the cellular coat this matter had but little attachment, except towards the extremities of the tumor, where its quantity diminished.

In this case the external iliac artery received its blood by two channels, the larger quantity passing

\* Plate 3. L.

through the aneurismal sac, the smaller through the flattened iliac trunk, that from the aneurismal sac being conveyed by a pretty large and circular aperture above, and by two openings below.

In the interior of the aorta were many patches of ossification, and atheromatous substance; one of these in the right iliac had caused the effusion of a layer of lymph, whose margins were so nicely blended with, and attached to the internal coat that scarcely any distinction could be observed between them.

Some considerations suggest themselves from the examination of these dissections.

1st. How is this species of aneurism formed?

2d. What are the changes which the sac undergoes in this case?

3d. Are these changes sufficient to enable the aneurismal tumor ultimately to perform the functions of the artery?

Upon the examination of the first case, I was at a loss to explain it: so little did the tumor resemble an aneurismal sac, and so similar was its structure to that of the artery, that I was rather inclined to consider it as an uncommon *lusus*. In the second case, however, the doubt was cleared up, for the aneurismal sac had not undergone that revolution in its structure, which might have given rise to such a mistake; and

lastly, a similar aneurism having commenced in another part of the artery, afforded some explanation of the progress of the disease.

The peculiarities of this form of aneurism naturally lead us to refer to the descriptions which are given of the origin and progress of aneurism in general. We are told that simple circumscribed aneurism may be produced in two ways, either by rupture of the internal and middle coats of the vessel, with dilatation of the cellular coat, or by dilatation of all the coats: the arguments in favor of one or other of these modes have, for many years, been supported by cases, which are considered conclusive by the advocates of either opinion.

Mr. Hodgson, in his treatise on this disease, endeavours to reconcile the abettors of these hypotheses by adducing cases in favor of both, and pointing out to us the means by which we may in general discriminate between them; he seems, however, to favor the opinion that, in most instances, the aneurismal tumor commences by a dilatation of all the coats of the vessel, which in the progress of the disease give way, and depend on the surrounding parts for the formation of a cyst.

The difficulty of deciding between these doctrines seems to have arisen from a circumstance, which I think I have been able to trace; namely, that in small aneurisms, produced by rupture of the inner coats, the lymph thrown out from the surface

of the sac sometimes assumes so much the appearance of the inner surface of the artery as not to be easily distinguished from it; even in large and old aneurisms a considerable part of the sac, around the opening of the artery, is often as smooth and thick as the vessel itself, this smooth portion being gradually converted into the rough layers of lymph, which the aneurismal sac contains.

In these cases of aneurism the disease seemed to have commenced in the way it usually does in large arteries, by a dilatation of the internal and middle coats, as was observed in the aorta of the second case;\* a section of the vessel, which was accidentally made, shewed that the blood did not equally protrude all the coats, but rather detached the cellular from the middle one, and thus endeavoured to pass along the side of the vessel, which it might have done to a greater extent, were it not that the sac gave way; the blood forcing on made a passage into the artery,† the internal and middle coats of which having afforded less resistance than the cellular.

The blood having thus found a free passage, the over distension of the sac was taken off, and a new change commenced; the sac became lined with lymph, and assumed a smooth surface, and was now capable of re-

\* Plate 3. M.

† Plate 3. K.

sisting the force of the circulation ; the rent in the artery enlarged, and the greater portion of the blood passed through its new channel ; the original vessel, compressed by the tumor, had its direction altered, and that of the new formed canal assumed its place.

In these aneurismal sacs then, we have sufficient evidence of their capability to contract and resist the pressure of the blood, when the force of the column is sufficiently diminished ; and that the powers of restoration in the sac are fully competent to make it a new and perfect channel for the blood, when the irritation arising from over distension is removed ; but that such will be the case in every instance of this form of aneurism, is more than can be expected.\*

\* The preparations from which the engravings have been made are preserved in the Museum of the Royal College of Surgeons.

**A CASE**  
**IN WHICH**  
**A LARGE COAGULUM**  
**OF**  
***BLOOD AND URINE***  
**WAS**  
**EXTRACTED FROM THE BLADDER,**  
**BY MEANS OF A SYRINGE.**  
**BY L. BYRON, M. D.**

LICENTIATE OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

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**IT** is a well known fact, that extravasated blood will coagulate at the ordinary temperature of the human body, so that when it is effused into the bladder, and mixed with the urine, in cases of injury or disease, one firm mass of coagulum may be formed.\* Should this take place to a moderate extent only, no extraordinary efforts will be necessary for its removal, the coagulum will gradually dissolve, and by attention to the original cause of the hæmorrhage,

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\* Phil. Transactions, vol. 86. Home on Strictures, Art. Hæmorrhage.



a recurrence of it may be prevented. But should the bladder become so far distended with blood as to have its office obstructed, or the function of the kidneys affected, the case becomes one of the greatest importance, and will require the most prompt and active measures for its relief:

In the following case of the latter description much benefit was obtained from the use of the syringe,\* although the application of that instrument was too long delayed to effect a cure, from a supposition, I presume very generally entertained, that it is not adequate to the removal of coagulated blood from the bladder.

November 9th, 1820. J. S. a robust man, æt. 64, was attacked with retention of urine, which he ascribed to his having rode a great deal on the preceding day, the air being damp and cold. I saw him on the evening of the 10th, thirty hours from the commencement of the attack. His pain, which he chiefly referred to the glans penis, was excruciating, with a desire to empty his bladder every three or four minutes. He had frequent stools with tenesmus.

Three pints of high coloured urine were drawn off by an ordinary sized catheter; considerable resistance was given to the introduction of the instru-

\* For the use of the syringe, in cases of retention of urine, occasioned by blood, see *De la Médecine Opératoire, par Sabatier*. tom 2. *Cooper's Surgical Dictionary, &c.*

ment, by a stricture near the bulb of the urethra, and also by the prostate gland, which was enlarged and inflamed.

Twenty ounces of blood were taken from his arm; his bowels were freed with the oleum ricini; he was put into a warm bath; leeches were applied to the perinæum; a common enema was administered, and repeated fomentations of the hypogastrium and perinæum were directed.

In six hours after the catheter had been introduced, the symptoms became so urgent, that it was necessary to introduce it a second time, and about twenty ounces of high coloured urine were drawn off with much relief.

As many leeches were then ordered to be applied to the perinæum as the surface would admit of. An anodyne injection was administered, and the fomentations were continued.

11th. Nine leeches had been applied yesterday, and a copious discharge of blood produced. A pint and a half of urine was drawn off this morning. A gum elastic catheter was introduced, and left in the urethra, and he was directed to draw off the urine every sixth hour. The enemata and fomentations were ordered to be continued.

No untoward symptom arose from this period till

the 15th; when, having passed some urine in a warm bath, for the first time since his illness, without the catheter, he was induced in the course of the evening to sit up for three hours, which act of imprudence was speedily followed by a return of his former sufferings, and in an aggravated degree. A catheter was introduced into the bladder with considerable difficulty; nothing passed through it at first, but a few drops of blood. By directing the point of the instrument, however, towards the superior fundus of that viscus, I succeeded in drawing off about four ounces of high coloured urine, followed by blood, which clogged the openings of the catheter, and rendered its removal necessary.

The usual antiphlogistic measures were vigorously pursued without any improvement in the symptoms. On the 17th, I saw him, with Dr. Browne of Navan. No urine had passed since the 15th; the abdomen was prominent and painful immediately above the pubes, and the desire to pass water was constant. Having introduced my finger into the rectum, I distinctly felt the tumified bladder, which extended beyond the reach of the finger; it was soft to the touch, but so sensible that the slightest pressure on it was productive of much pain.

The pulse was 100; his tongue loaded; his countenance was expressive of much anxiety, and he had hiccup.

Eighteen leeches were applied to the abdomen,

and the enemata and fomentations were employed as before.

18th. The leeches bled freely, and he had about three hours uneasy sleep during the night; the abdomen was not so painful on pressure, nor was his desire to pass water so frequent; his countenance, however, was more expressive of distress, and the hiccup was troublesome.

A large sized silver catheter, with one oval opening near the extremity, was introduced into the bladder. Having adapted the pipe of an eight ounce brass syringe to the external opening of the catheter,\* we succeeded, by repeated quick strokes of the piston of the syringe, in drawing off about two ounces of firm coagulum, of a black colour and urinous smell. By repeating the operation sixteen ounces more were drawn off in half an hour, and our patient expressed himself much relieved. His bowels being confined he was ordered a dose of the *ol. ricini*, and an anodyne to be taken at night, should pain or restlessness render that remedy necessary.

19th. The anodyne was not taken, as he got about three hours sleep in the early part of the night.

\* It must be obvious, that unless the pipe of the syringe is adapted to the mouth of the catheter, so as to exclude the pressure of the external air, the operation will be unsuccessful. It may not be unworthy of remark, that the opening of the pipe of the syringe was larger than is usual for an instrument of that size.

About eight ounces of a ropy dark brown matter, containing some firm coagula, were drawn off by the syringe and catheter, twice employed; each operation occupied about six minutes. His bowels have been opened; pain and fulness of the abdomen are quite gone, notwithstanding which he is restless; the pulse 97, and weak; the tongue is covered with a brown crust; the hiccup is very troublesome.

*Habeat vini rubri uncias sex.*

℞ *Aq. Cinnam. unciam.*

*Æther. Sulph.*

*Tinct. valerian. Animon. singulorum drachmam.*

*Syrup. zingiberis 3ss. M. ft. Haustus.*

*Sumend. 4ta. q. q. hora.*

20th. One draught only was taken, as it seemed to produce a spasmodic affection of the muscles of his throat, by which respiration was suspended for nearly a minute. He has had about two hours sleep at different times during the night. Six ounces of a brown mucous matter passed off this morning without the syringe; no coagula were visible.

*Continuetur vinum, et habeat Haustum Anodynum hora somni. s. o. s.*

21st. The anodyne procured little or no sleep. Some ropy urinous matter passed involuntarily during the night; has had two or three spasmodic catchings in his throat; pulse not improved; hiccup troublesome.

*Repetatur Haustus Anodynus, et habeat vinum ad uncias octo.*

22d. Has passed a restless night. A small quantity of urinous fluid was found on his sheets this morning. In the early part of the night he called for the urinal, and succeeded in passing about two table-spoons full of the same kind of fluid.

His countenance was sunk and expressive of anguish ; he complained of an internal heat, and a constant desire to empty his bladder. Spasmodic catchings and hiccup more troublesome than usual.

23d. Is comatose this morning. The catheter was introduced, but the bladder was empty.

He remained in this state till the following day, when he expired.

I regret that I was not permitted to make an examination of the body after death, which would have enabled me to have reported the changes which took place in the parts affected. It may be inferred, however, from the small quantities of urine secreted by the kidneys, that these organs had suffered ; and it is probable that the constitutional derangement, and fatal termination of the case, were in a great degree attributable to this circumstance.

It is a remarkable fact, that surgical writers are

altogether silent on the use of the syringe in cases of retention of urine, arising from coagulated blood in the bladder, or speak of it as a means "that may be tried," without promising any thing for its success. In proof of this assertion it will only be necessary to advert to the practice of breaking down and dissolving the coagula, by the injection of various fluids into the bladder,\* a measure which has been laid aside since the observations and experiments of Sir E. Home,† to whom merit is due for having first satisfactorily explained the changes which blood undergoes when mixed with the water of urine. No mention is made of the syringe, however, notwithstanding that many cases are recorded where that instrument, if employed, might have been attended with good effects.

\* Œuvres ch. de Desault, Tom. III. Nous ajouterons seulement ici que, si le sang s'est coagulé dans la vessie, il faut chercher à l'évacuer au moyen de la sonde, et, si les caillots ne pouvoient pas couler par cet instrument, tâcher de les diviser et de les delayer en poussant, dans la vessie, des injections d'eau tiède, on d'une dissolution très légèrement alcaline.

† Practical Observations on the Treatment of Strictures by Everard Home, esq. vol. 1.

*Kells, Sept. 1st. 1821.*

**A CASE**  
**IN WHICH**  
**SUFFOCATION WAS NEARLY PRODUCED**  
**BY A**  
**PORTION OF SOLID FOOD**  
**LODGED IN THE**  
**ŒSOPHAGUS.**  
**BY JOHN HOWSHIP, ESQ.**

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**THE** circumstances to which accident may give rise are almost endless in variety. In a study which, like that of surgery, regards all the consequences of accident, and most of the effects of disease, much, it must be admitted, still remains to be done; this reflection, however must not be allowed to damp the ardour of research, but weighing the importance and dignity of the subject, it should rather inspire a determination to overcome, by indus-



try and perseverance, those difficulties that may defy the efforts of genius or speculation.

In the second volume of the Dublin Hospital Reports, among many other highly valuable observations, an interesting case is related by Mr. Kirby, where the œsophagus was obstructed in the act of deglutition. The recital of the case leads the intelligent author to remark, that "it seems to confirm the opinion that it is not to the mechanical obstruction of the trachea we are to look for the immediate cause of death, when a solid substance is arrested in its progress through the upper part of the œsophagus, so much as to spasmodic constriction of the muscles of the glottis."

The detail of the above mentioned case is so clear and so concise as to ensure its making a strong impression. It brought to my recollection a case nearly parallel, to which I was myself called, in the year 1816. While seeing some patients in the St. George's Infirmary, I was requested to visit immediately an aged woman in one of the infirm wards, who was said to be dying. On reaching the apartment I found her on her feet, supported by the nurses, with every expression of despair in her countenance, oppressed by the most extreme dyspnoea, and on the eve of strangulation.

I was told something had stuck in her throat while eating, and on inquiring of her where she

felt distress, unable to speak, she snatched violently at a particular part of her throat, as if earnest to tear out the obstructing cause, which appeared to be situated opposite the upper edge of the sternum.

As she was already on the verge of suffocation, it was clear that she must be relieved immediately, or not at all. I therefore called out for oil, pieces of old linen, bits of string, and some whalebones, pulled from the women's stays: all these were instantly collected. Selecting a strong flat slip of bone, I cut a deep notch on each side near one end, over which I tied fast several slips of the linen, thus forming a ball the size of the canal. This, dipped in oil, was passed down the throat, the flat side of the instrument being towards the spine. It passed freely down to the piece of meat forming the obstruction, which was found to have been arrested just where the œsophagus enters the chest. Considerable force was required to move it, but once leaving its place, it was with ease passed down almost into the stomach, where it was allowed to remain.

The relief from the operation was complete, and its effect instantaneous, taking place the instant the pressure was removed from the trachea. The poor creature lifted up her hands in fervent gratitude to heaven, for having thus redeemed her from sudden death. The moment the mass was pushed down the œsophagus, it became evident enough that the mechanical pressure on the trachea had been the sole

cause of the strangulation, which was totally removed the instant the operation was performed.

On being closely questioned, the woman said she was clear that all her distress and difficulty was confined to the spot where the food had stopped ; it did not appear that in this particular case the obstruction had produced pain or spasmodic constriction in or about the larynx.

*Great George's-street, Hanover-square,  
April 5, 1821.*

ON A

**PARALYTIC AFFECTION**

OF THE

**SUPERIOR EXTREMITY.**

BY ROBERT HEALY, M.B.

LICENTIATE OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN  
IRELAND, &c.

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**PHYSICIANS** frequently meet with instances of a species of palsy which, attacking the superior extremity, seems unconnected with any organic disease of the brain or nervous system. As far as I know, this affection has not been described in books, nor is the method of treatment by which it is most successfully combated, generally known, and therefore I shall make no apology for making public the following observations.

The affection alluded to attacks persons of all ages, and males and females seem equally liable to it. Prior to the attack, the patient, generally

speaking, has enjoyed very good health, consequently he is not a little surprized, on awaking from a long and sound sleep, to discover a total loss of power of one hand, and, what is very remarkable, he generally describes the loss of power as extending to the middle of the forearm; in some few cases it extends to the elbow, and is, for the most part, accompanied with a sense of great numbness. The fingers are so completely paralyzed, that the patient is deprived of their use, and great dejection of spirits attends the complaint.

None of the individuals so affected have been able to assign any cause for their illness, unless the pressure upon the nerves, occasioned by lying with the head resting on the arm, and the number of persons who have been attacked, after sleeping in a chair, in that position, certainly gives countenance to this explanation.

Most of the usual remedies for palsy have been tried without effect. After bleeding, blistering, and strong internal stimulants have been repeatedly applied to many patients, with little or no advantage, the disease has invariably yielded to electricity employed in the following manner.

Let the patient be seated on the insulated stool connected with an electrifying machine; which should be so excited, that the prime conductor will emit sparks not less than three inches in length; the operator will then be able to draw, with the brass

ball-director, strong pungent sparks from the diseased arm or hand ; then let him, in five or ten minutes, apply the ball in contact with the clothing of the arm or other part so affected ;—a stream of electric sparks will issue from those parts to the ball, and cause a smarting and painful sensation ; and if this be continued in one place for some time, slight vesication will be the consequence, so that the operator will be obliged to move the ball gradually up and down the diseased parts. In some instances a return of feeling or motion will take place while the patient is under the first operation. In most cases, a longer time is required ; nay, perhaps, a fortnight may be necessary, if the electricity be applied but once a day ; but I have every reason to know that perseverance in this method of treatment will ultimately prove successful.

# A CASE

OF

## *PERFORATION OF THE PERINÆUM.*

BY JOHN C. DOUGLAS, M. D. &c. &c.

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**THERE** is scarcely a systematic work on midwifery, in which mention is not made of laceration of the perinæum : a casualty which not unfrequently takes place, particularly in first-births, when the foetus is passing, or about to pass, through the os externum.

The description of accident of this nature that more usually occurs, and which is sometimes unavoidable, is a simple rent in the perinæum, commencing at its anterior edge, and running either directly or obliquely backwards. The portion of it traversed by the rent is variable in different cases ;

It often does not exceed half the distance from the fourchette to the anus ; it sometimes, however, runs entirely to the sphincter ani ; and, in some rare instances its course is continued through that muscle, and the inferior portion of the rectum. I may also remark that in a few instances of simple laceration, the rent commences at a point in or near to the centre of the perinæum, and thence extends forward to the vagina.

But, there is another species of laceration worthy of notice, although very rarely occurring, which Doctor Denman has not inaptly termed a perforation, or bursting of the perinæum. In this, the foetus is supposed to be protruded through the perinæum solely, without injuring either the sphincter ani muscle, or the inferior commissure of the labia pudendi.

The possibility of such an occurrence is doubted by some practitioners ; and I must confess I am rather disposed to doubt the practicability of a foetus passing through a perforation in the central part of the perinæum. It is true, it is not distinctly stated in the detail of such cases that the perforation was central ; yet, such is the inference to be drawn from the description of every case of the kind, which I have seen. But I am of opinion that this particular kind of rent or perforation, instead of being in the centre, is usually situated towards one side of the



perinæum, and involving also, in its necessary amplification, the labium pudendi of the same side with other parts, as occurred in the case which I am proceeding to relate.

Bridget Brophy, aged 23, was admitted into the Lying-in Hospital of this city on the 24th of January 1810; at which period I was the resident assistant of that extensive establishment. She was accommodated in ward, No. 7, and occupied bed No. 72.

No symptom of labour was manifest until the evening of the 26th; and even then the pains were so slight, together with the circumstance of a first pregnancy, as not to excite any apprehension of approaching delivery.\* It may be proper here to remark, that from the multiplicity (nearly 3000) of labours annually occurring in this hospital, the nurse-tenders become so expert in prognostic, as to be able, very generally, to form a probable opinion of the progress of labour, merely from the tone of the patient's voice.

Notwithstanding the previous tranquillity, the nurse's attention was suddenly excited, about ten o'clock, P. M. by the sound of moans denoting approaching delivery. The pupil of the night was

\* All the patients of the ward, this excepted, had been well from the previous day.

called, and he had not been many minutes at the patient's bed-side when she uttered a shriek so unusually expressive of suffering, as to induce the nurse to send for me; which she was the more willing to do, as the gentleman in attendance had very recently entered the hospital as a pupil.\*

In proceeding to make myself acquainted with the nature of this case, I found that the head of the foetus had protruded; but, instead of its being in the usual position, it was closely applied to the inner, with an inclination to the posterior part of the patient's left thigh: she was lying in the usual posture, on her left side. While I was reflecting on these circumstances an uterine effort succeeded, by which the remainder of the foetus was protruded. It was of the male sex—briskly alive—perfectly formed, and without any peculiarity.

I still could not comprehend this anomalism, and having viewed the parts, I beheld a shocking laceration, which had the appearance of a large wound inflicted by external violence. Although I have denominated this a case of perforation of the peri-

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\* Only for the circumstance of the nurse having been taken at unawares, the patient would have been removed for delivery, according to the custom of the hospital, to a couch situated near the fire-place.

næum, yet the opening was only partly comprised in the perinæum laterally, partly in the left labium pudendi, but chiefly in the integuments of the thigh.

Having disengaged the infant, I put back the funis through the wound into the vagina, and brought it out at the os externum, with the intent of thus extracting the placenta. The placenta, however, seemed determinately disposed to follow the track of the child; its gravity, the dependent situation of the artificial outlet, together with the circumstance of that being much more capacious than the natural passage, all contributed to this effect. I therefore allowed the placenta to fall out through the laceration, and the end of the funis was thus drawn again within the sphincter vaginæ, and followed the placenta.

To this procedure I had but little objection, as it was evident that the transit of the placenta would not enlarge an opening through which the child had passed; and besides, I had scarcely a choice, as I found it would require the exertion of more extracting force than could, under the circumstances, be judiciously used to pull the placenta through the os externum, which was little disposed to dilatation.

Notwithstanding this extensive injury no extraor-

dinary activity of after-treatment was required to obviate febrile action or inflammation, nor were any other than simple topical applications required ; even in the course of one day the parts around had so considerably contracted, that the wound did not present half so formidable an appearance as it did shortly after delivery.

The only after occurrence worth notice was that, at the expiration of seven weeks, I found the space left by destruction of substance not likely to be entirely filled up by granulation, the opening yet remaining being nearly equal in size to the os externum, and separated from it only by the sphincter vaginæ. The part of this muscle, which formed the barrier between the two apertures, had become much weakened and faded, in consequence of being denuded and separated from its natural attachments. I therefore divided it at a point about two-thirds distant from the superior, and one-third from the inferior commissure of the os externum. This was only anticipating a process which was rapidly advancing, as it was evident, from the daily fading of the sphincter, which was destitute of support and nourishment at this part, that it would shortly give way spontaneously.

This woman was discharged from the hospital, in good health, on the 26th of March, just two months from the day of her delivery ; and I may add, she left it under circumstances which would not excite

any apprehension of a similar casualty in future deliveries.

Although it may have been regretted that the attendance on this patient devolved in the first instance on a pupil of little experience, yet I am of opinion that the casualty which occurred could not, under any management, have been obviated. This opinion I formed from the undilatable state in which I found the os externum, when I made some attempt to extract the placenta through it, and it was confirmed by the circumstance of an experienced nurse having been taken so completely unawares. I likewise feel satisfied, that what may be termed real labour had commenced only a short time before the pupil was called, and that probably during the pain, when the nurse sent for me, the head of the fœtus pierced the vagina or internal coat of the perinæum; and that instead of continuing its progress (as may have been usual in such accidents) without cessation through the external tunic, it was, from the rigidity of this, forced down between the tunics of the perinæum and the folds of the left labium pudendi, under the integuments of the thigh; and probably I do not err in conjecturing that, during the succeeding pains, the head was forced through the external tunic of the perinæum, a part of the left labium, and part of the thigh, in which situation I found it on my arrival; and that by the next uterine effort the remainder of the child was expelled,

without any attempt on my part at resistance or retardation.

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After the foregoing detail had been committed to paper, an experienced practitioner in midwifery related to me an occurrence which contains the rationale of the child's head having pierced the vagina, much higher up than before it could have met with any resistance from the os externum to give it such a direction.

In the case to which I allude, the expulsive efforts of the uterus are represented to have been very powerful, while the os uteri was neither dilated nor disposed to dilate. The head of the foetus thus bearing upon the cervix, burst through it during the presence of a strong pain ; the laceration took place upon the finger of the accoucheur, and was continued down the entire length of the vagina to the os externum.

The difference in the two cases is, that in the one, which I have detailed, the foetus burst, as I *now* suppose, through the cervix uteri, and *through* the vagina, and passed completely behind the latter, at or near to the sacro-iliac synchon-

drosis ; whereas, in the case related to me, the foetus burst through the cervix uteri posteriorly, and only lacerated the vagina, without passing through the laceration.

**CASES**  
**OF**  
***JAUNDICE,***  
**WITH**  
**DISSECTIONS.**

**BY**  
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ASSISTANT PHYSICIAN TO STEEVENS' HOSPITAL.**

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**J**AUNDICE is a symptom which arises from a great variety of causes. In the majority of instances its origin may be traced to some obstruction of a merely mechanical nature, such as gall-stones, tumours, indurations of the liver, or pancreas ; and such are the causes of jaundice which have been chiefly dwelt upon, and most fully discussed, by those who in their writings have treated on the subject. But there are cases of jaundice, and those not a few, in which dissection fails to discover any mechanical



obstruction : in which the absorption of bile, and the admixture of this fluid with the blood, have been produced by circumstances which leave no trace behind,—at least none that the most accurate anatomical investigation has as yet been able to detect. Such cases of jaundice, though but glanced at by the generality of writers, deserve to be more closely looked into, and are often connected with symptoms and appearances, the knowledge of which is not only satisfactory to the mind, but highly advantageous in conducting the treatment. The object of this paper is to bring forward instances in which Icterus is connected—sometimes with a deranged and even fatal affection of the brain—sometimes with a diseased condition of the mucous membrane of the intestines. It happens not unfrequently that patients, labouring under jaundice, are seized suddenly with symptoms of cerebral disease, and die phrenetic. Upon looking into several cases of this kind, I find that this form of disease exists principally in persons whose nervous system has, from any cause, been previously injured and weakened. The first case of this kind, which excited my attention, was one published by Dr. Cheyne, in the first volume of the Dublin Hospital Reports, p. 282.

The subject of this case was a young woman, whose strength had been broken down by repeated and protracted courses of mercury ; her constitution was peculiarly susceptible of mercurial action ; she was a wretched, emaciated, unhealthy creature, confined almost entirely to bed, and breathing for se-

veral months the impure air of the Lock Hospital. It is proper also to mention that she had been using, for a considerable time before her death, the arsenical solution, in small repeated doses. From this medicine she appeared to derive benefit; when, at a moment least expected, symptoms of a violent phrenitis supervened, and rapidly terminated her existence. Whilst in attendance at the Lock Hospital, I had daily opportunities of witnessing the progress of this case, and from my note-book the history of it, which has been published, was derived. The condition of the large intestines in this female was very remarkable; the quantity of knotted feces which occupied the intestinal pouches was almost incredible: and this their condition the more claims attention, when it is known that alvine evacuations had been regularly maintained during the whole time of the residence of this patient in the hospital. These were fluid and watery stools; such as are frequently carried off by medicine, whilst scybala in abundance remain behind. That this is often the case every physician is aware: but I believe it is not generally known that this state of the large intestines is sometimes a cause of jaundice.\* While pursuing the dissection of the body of this female, the following curious appearance was exhibited: bile, mixed with a substance resem-

\* Of this fact I was then ignorant, nor was it until long afterwards, having met with a similar case, that I was led to the conclusion, that a long continued obstruction in the large intestines becomes occasionally the immediate cause of Icterus. The symptoms of the case which led me to adopt this opinion I shall presently relate.

bling curd, flowed in considerable quantity from the lactiferous ducts; the mammæ appeared full, and by a very moderate pressure there were obtained several ounces of a tenacious yellow substance, bearing all the visible characters of pure bile; all the serous membranes, as well as the skin and adnata, exhibited likewise the bilious tinge. We cannot, I think, admit the opinion of the older writers, that bile may make its appearance in the body, without having been separated from the blood by the gland, whose peculiar office it is to secrete this fluid. Such an opinion seems to me contrary to every known law to which the process of secretion is obedient. We can hardly admit that urine may be found without kidneys to secrete it, or milk where the mammary glands exist not; there are however facts, which establish beyond a doubt that a fluid (urine for instance) having been secreted, and some obstacle existing to prevent its removal from the system by the usual course, is absorbed; and either deposited in the ventricles of the brain, or else its presence is detected in the matter perspired, or it is even found to accumulate in the stomach, and is rejected by vomiting. Of this interesting fact I met lately with a well attested instance.

In like manner the bile having been secreted, and not suffered to descend in the usual way, is absorbed; and appears in the skin, urine, tears,\* serous membranes, brain, and even, as in this female, finds its

\* See Heberden's Commentaries, 4th edition, page 206.

way to the mammæ : its removal from the system being attempted not only by the skin and kidneys, but also through the medium of the lactiferous ducts. I obtained, from Dr. Cheyne, a few days since, the following communication, which I shall give in his own words. " Last summer I visited a lady in jaundice with the following symptoms :—Skin and urine deeply charged with bile ; slight anorexia ; languor ; stools pretty natural, as were the tongue and pulse. The indisposition was so slight that the individual in question had no intention of sending for a physician, till she discovered that the bilious tinge of her skin was imparted to her linen. To satisfy my doubts, she repeatedly wiped her face with a cambric handkerchief, which thereby acquired a saffron colour. Her liver was not sensibly affected in respect of enlargement or tenderness. She speedily recovered ; indeed her recovery might be termed spontaneous, nothing having been prescribed for her but some mild purgative medicine. She was directed to use light animal food, to abstain from wine, and avoid fatigue." This fact decisively establishes the presence of bile in the matter perspired. I have not seen, nor have I been able to learn, any instance in which the milk of a nursing woman was tinged with bile. I am not aware that any such fact is on record, yet it does not seem to be an improbable occurrence. Though these observations do not bear directly on the subject we are engaged in, yet the curious fact of bile being found in the female breast seems to warrant this digression.

But to return.—This patient having had the nervous system debilitated by frequent courses of mercury, by impure air, and all the melancholy circumstances of her forlorn and wretched situation, (for unhappiness was portrayed in her countenance) was affected with jaundice, and whilst in this state high cerebral excitement having suddenly supervened, she survived its violence but three days. I suppose, the opinion, that long, frequent, and severe courses of mercury, do in many constitutions weaken and injure the nervous system, will scarcely be controverted. Indeed this seems to me to be one of the worst effects of prolonged mercurial action. I could easily bring forward facts, which establish beyond question its pernicious effects upon the brain and nerves; and particularly in very young children. Violent mania and convulsions are sometimes consequences of its injudicious administration; we cannot therefore be surprised that, in delicate constitutions, mercury, even in small quantities, should affect injuriously the cerebral and nervous systems.

I shall now proceed to notice the case illustrative of the fact, that the cause, which prevents the free descent of the bile and produces jaundice, resides sometimes in the large intestines; the connexion which is known to exist between the functions of the brain and those of the liver, being also remarkably exemplified in the same case.

Mr. P. a very old gentleman, had had for many

years of his life a reducible scrotal hernia on each side, complicated with hydrocele of the tunica vaginalis testis on the right side. He was of an anxious turn of mind, and exceedingly irritable. He had reached the eightieth year of his age, having enjoyed, till then, uninterrupted good health. It was about this period of his life that symptoms of disease first appeared. He was affected with jaundice, for which he was treated by Doctors Perceval and Falloon; and the disease was completely removed. Several months afterwards, I was sent for in haste, and informed that he was bleeding profusely on his night-chair. For some time past he had complained of a dull, heavy, and very distressing pain about the anus, and lower part of the back; this pain was much increased whenever he went to stool. He had been treated for internal piles; an aperient electuary was daily administered, and evacuations regularly procured. When I saw him, the skin was yellow, harsh and dry; the adnata deeply tinged; the pulse full; intermitting every fourth pulsation, and not increased in frequency: the tongue black, dry and thickly coated; urine scanty and high-coloured: appetite extinguished: vertigo, debility, loss of spirits, impaired memory, incoherence in manner and language, irresistible drowsiness, and disposition to sleep. I found him sitting on his night-chair, in a state of considerable alarm. On inspecting the matter evacuated, it appeared to consist chiefly of pure, dark-coloured, clotted blood. I also perceived, at the bottom of the vessel, a few hard round lumps of feces. This appearance led

me to suspect the cause, as well of the hæmorrhage as of the other symptoms, and in consequence I directed pills containing each a grain of scammony, a grain of rhubarb, and a grain of sulphate of kali. Of these pills, two were directed every second hour, till the bowels should be freely evacuated. Visiting him the following day, I was not a little surprised to observe a large vessel, more than half filled with scybala, which were every where tinged with blood. The same treatment having been continued for several successive days, these hardened feces were daily evacuated in considerable quantities; and with them the jaundice, and every other morbid symptom, quickly disappeared; so that in a few days this old gentleman was restored to his wonted health, strength, spirits and appetite. There still remained with him, however, a disposition to reproduce those morbid accumulations: whenever they were again produced, jaundice re-appeared; and with it loss of memory, vertigo, drowsiness and incoherence. On one occasion the muscles of the left side of the face were paralyzed: this symptom, as well as a slight paralysis in the left arm, disappeared completely, as soon as the bowels were fully evacuated. Afterwards, the bowels being maintained in a moderately lax state by such medicines as are best calculated to bring away solid matter,—the diet carefully regulated, and consisting chiefly of soft and fluid materials, and exercise, such as an old and feeble frame could easily bear, being enjoined, the feculent accumulations were prevented; jaundice warded

off, and the functions of the brain were free from derangement.

In this case we are furnished with another instance of the connexion which exists between obstruction in the large intestines and jaundice ; and also of the connexion which may be traced between this latter symptom, and an excited and deranged condition of the cerebral functions. Here too, as in the former case, aperient medicines were daily administered ; fluid feces, slightly tinged with bile, regularly evacuated ; and yet the bowels remained loaded with solid matter. I have remarked, in dissection, that in those pouches in which scybala are lodged, the mucous surface, against which they rest, is frequently reddened and vascular. The irritation of these hard substances accounts for the hæmorrhage, which in this old gentleman had been attributed to internal piles : it seems to me also that the loss of blood added much to the efficacy of the purgative pills, which probably would not otherwise have so effectually unloaded the bowels.

A case, not unlike the preceding, and interesting in a practical point of view, I shall briefly relate : Some time ago I was requested to visit a very old lady, who had been remarkable for the liveliness of her disposition, the excellence of her memory, and an uniform flow of spirits. I found her much changed : she was now listless, sleepy, and forgetful : the names and persons even of her own immediate family she forgot. Her tongue was much loaded ; the palms of



her hands were dry and hot ; a continual state of fever was maintained, and her sleep was disturbed and unrefreshing. She had conceived for her food so strong a dislike, that taking it seemed to her like the swallowing of medicine. On inquiry I learned that an apprehension, on the part of her friends, of the debility which was fast increasing, induced them to force upon her continually large quantities of the most nutritious food. Hence the stomach and bowels were oppressed and overloaded. The bile could not easily descend, and the functions of the brain were from sympathy impaired. I directed much smaller portions of food, at regular intervals of four hours : daily exercise in a chair placed upon an elastic board ; and small doses of castor oil to unload gently the bowels. Under this treatment her spirits were quickly restored ; and she again became what she had formerly been.

Care must be taken in old people not to oppress the digestive functions by an excess of food. This precaution is peculiarly necessary at a period of life, when the organs of digestion are daily losing their tone ; and when exercise, so necessary to the due performance of the gastric and hepatic functions, can little, or scarcely at all, be enjoyed. Hence the best rule, for maintaining clearness of intellect in old age, is to proportion carefully the quantity of food to the powers of digestion, and to take good heed that the former shall not exceed the latter. It is remarkable that this old lady grew fat and strong ; and regained an appetite so keen, that, instead of

forcing her to take food, it now became necessary to restrict the full indulgence of her appetite.

A strong, muscular man, about forty, was admitted into one of the fever wards at the House of Industry, during the prevalence of the epidemic fever which raged lately in this country : he was deeply jaundiced ; his tongue was perfectly dry and almost black ; his pulse natural. I observed a wildness about him, which led me to augur the worst. The opening of the temporal artery, and an active purgative, were directed. He declared he was quite well, and would quit the hospital. He vociferated repeatedly that no man should alter his purpose, or persuade him that he was not in perfect health. It was vain to remonstrate ; he would not listen to the assertion, that his situation was one of the most imminent danger. He obstinately resisted the adoption of any remedy whatever. A few hours afterwards he became wildly and furiously delirious, fell into violent and protracted convulsions, and expired at midnight. Permission to examine the body, I regret to say, was not granted. Here is another case of jaundice, terminating in a fatal affection of the brain and nerves. If it be true, as I think I shall hereafter be able to prove, that the contagion of fever strikes first upon the nervous system, then this case furnishes us with a strong corroboration of the opinion, that jaundice, however produced, in a person whose nervous system has been debilitated and impaired, is apt to issue in a disease of the brain, which often terminates fatally and rapidly.

A girl about twenty years old, who, while under the influence of mercury had been exposed to cold, and had lived intemperately, was admitted into the Lock Hospital, for the cure of venereal ulcers situated on the genitals and various parts of the skin. Whilst in the hospital, she was informed abruptly of the death of her uncle, the only relative who had shewn her kindness. An universally jaundiced appearance was soon observed to have taken place. Not long afterwards, febrile symptoms having appeared, she was transferred to the Hardwicke Fever Hospital:—from thence she was ordered to the Whitworth, where (no bed happening to be vacant) she was not received. For several days after her return home, there was no remarkable change in the state of her health:—she continued to be deeply jaundiced; at length, quite suddenly, symptoms of a very alarming nature appeared. She lay in a state of apparent insensibility; when spoken to, she seldom, and with difficulty, replied; her eye-lids drooped; her breathing was stertorous; there was so much pain in the abdomen, that peritoneal inflammation was apprehended. At the approach of night she could hardly be restrained in bed; she screamed violently, and was constantly agitated. She was seen in this state, and treated by Mr. Reed, one of the surgical pupils at Steevens' Hospital. When I saw her, she was insensible; the eyes were fixed; the carotids throbbed violently; and she was deeply jaundiced. In the evening she was again thrown into a state of extreme agitation, accompanied with loud screams.

After midnight she was seized with convulsions, which came on in rapid succession, and before morning she expired.

Dissection, which was performed a few hours after death, exhibited some congestion of the vessels of the brain: there was not any effusion on the surface, nor unusual deposition of fluid in the ventricles. The substance of the liver was deeply tinged with bile; its structure natural. The gall-bladder was contracted, and contained an extremely small quantity of dark green, ropy fluid; its internal membrane was very vascular. The transverse folds or bands\* of the inner membrane of the cystic duct seemed to be elongated, and to project beyond what is natural; so that a probe could not be made to pass either upwards or downwards. The hepatic and common ducts were pervious and unobstructed. In the duodenum a circular patch, about three inches in

\* The cystic duct presents externally a convoluted form; occasioned probably by the irregular transverse bands or folds, which are situated upon its internal membrane. As these transverse bands may project more in some cases than in others, I am not absolutely certain that the appearance described is a morbid one. It is well, however, to mention it; because a more accurate and close inspection of the ducts of the liver, in cases of jaundice, may throw light in many instances upon its cause. This convoluted form, and valvular condition of the inner membrane is peculiar to the cystic duct. It is beautifully exhibited in the gall-bladder of a lion, which was shewn me by Mr. Shekleton, demonstrator of anatomy at the College of Surgeons. These bands or folds often impede materially the progress of gall-stones.

diameter, of which the orifice of the duct was the centre, was highly vascular. The fluid in this small intestine was not tinged with bile: it was very abundant; and detached portions of yellow mucus, resembling that secreted in the nostril, floated in it. The stomach was much contracted, and on its internal surface there was, in various parts, the appearance of increased vascularity. The small intestines also were very much contracted: in one part to a very remarkable degree. The other abdominal viscera presented no unusual appearance. The thorax was not examined. This is another decisive instance wherein jaundice, caused by strong mental emotion, terminated in a violent and fatal affection of the brain.

I learned from Dr. Colles the circumstances of a similar case, which fell under his observation. A young gentleman, having a chancre on the glans penis, went to his house to consult him. He directed for him alterative doses of calomel, which were persevered in for about four or five weeks. The mercury seemed to agree well; no untoward symptom appeared; and the ulcer was completely healed. About three weeks afterwards this young man was observed to be deeply jaundiced; and having continued two or three days in this state he was seized suddenly with delirium, followed by repeated convulsions. These symptoms having continued for a few days, Dr. C. was sent for, and found his patient dying; the symptoms indicating evidently a

most violent affection of the brain. Every viscus in the body was most accurately examined, and not a trace of disease could be discovered. The external and internal parts were much tinged with bile.

Many such like cases have no doubt been observed by various practitioners. Few, however, have recorded those which they have witnessed. There are to be found in Morgagni's work some interesting observations on this form of disease: and, as they bear directly and forcibly upon the subject of this paper, I shall briefly quote the leading facts, leaving it to the reader to turn to the work itself, where the cases and dissections are fully related.

A young priest, soon after perturbation of mind, was seized with jaundice; pain in the epigastrium, vomiting: the stools colourless; after a few days he was restless, stupid, and forgetful; then delirious, and convulsed. He gnawed every thing with his teeth, struggled violently, and vomited dark matter. The blood rushed impetuously from an opening made in a vein; the serum gave to linen rags a yellow tinge; the convulsions ceased, he lay motionless and comatose, and died on the fifth day.

A young man was much terrified—the day after was icteric:—delirium, and the most violent convulsions came on; he died in twenty hours from the commencement of the delirium. The same author speaks further of a person in jaundice, at first without febrile symptoms, afterwards affected with fever,

delirium, tossing of the body, epileptic paroxysms. Three days before death convulsions came on; after which he died tranquilly. The liver, and all the parts of the body, internal as well as external, were tinged of a yellow colour to a very great degree.

Again, a lively good-natured young man became morose and depressed, and was affected suddenly with jaundice; and after the lapse of fifteen days he began unexpectedly to gnash with his teeth; and, after violent convulsions and howlings, died. The dissection of the bodies of these persons exhibited no morbid appearances, sufficient to account in any measure for the jaundice, delirium, convulsions, and death. This same writer justly remarks in another place: “Nec tamen refertis cerebrum ne tum quidem, neque cum immanes convulsiones fuerint, magno pere læsum appareat. *Fugere enim oculos potest id quod in illo erat delirii causa*: irritatis autem vel extra cerebrum nervis, aut, quod in Sacerdote illo ex dissectione conjiciendum est, spinali medullâ, horribiles possunt convulsiones existere.” *Morgagni de sedibus et causis morborum*. Epist. xxxvii. 6.

In observing upon these cases of Icterus, it may be said, that the affection of the brain was an accidental circumstance;—unconnected with the original disease, and arising from causes quite distinct from the presence or absence of bile in the circulat-

ing system. That jaundice is not the only, or even the principal cause, is very certain: for we often observe patients to be deeply jaundiced, and yet free from cerebral disorder. But that, under certain circumstances, in certain conditions of the nervous system, phrensy may be excited, either by the bile conveyed to the brain, or in consequence of the sympathy which exists between the cerebral and hepatic systems, is an assertion, the truth of which, I conceive, the facts stated sufficiently establish. In practice it is important we should be aware, that an Icteric patient, who has a weak and irritable nervous system, must be closely looked after, lest alarming symptoms should unexpectedly arise; and in cases of this kind, we should be very guarded and cautious in our prognosis.

The close connexion, which exists between the liver and the brain, is not only exemplified in disease being propagated from the former to the latter; but also is strikingly illustrated by the opposite fact, *viz.* that morbid action, going forward in the brain, often implicates the liver; and causes either derangement of its functions, or active inflammation. Yellowness of the eye and skin is sometimes the immediate consequence of a blow injuring the brain. A violent mental emotion produces a similar effect. Thus Jaundice is the result of causes, altogether dissimilar in themselves; but curiously alike in the effects they produce. By both the brain is violently affected; the injury in both instances is propagated to a distant organ. A person bitten by a viper soon presents a



jaundiced appearance. The poison appears to act injuriously on the nervous system ; the derangement of the biliary function seems to be an effect arising from the mischief done to the brain and nerves. It is not uncommon to find abscesses in the livers of those who have died from injuries of the head. In a large proportion of Hydrocephalic cases the liver is diseased as well as the brain : in these cases, however, the hepatic affection is usually the primary one. This connexion, between those two important organs, must be steadily held in view by those who would treat that formidable disease with judgment : and it will often happen that the early cure of the hepatic disorder, will prevent the occurrence of Hydrocephalus, even after the first symptoms of the disease have manifested themselves. In affections of the brain, the occurrence of a jaundice indicates the rapid approach of dissolution. This fact, to which my attention was first directed by Mr. Crampton, the Surgeon General, is strikingly illustrated in the following case, which, independently of its connexion with the subject we are engaged in, seems to me one of peculiar interest, and well worthy of being recorded.

Mr. ——— had attained his thirty-sixth year, was dark-complexioned, muscular and well formed : In his earlier years he indulged in habits of dissipation and intemperance. His mind was generally on the stretch, his aim to compass many things at once, and he was seldom free from anxious and busy thoughts. For the four last years of his life, his

periods of dissipation were shortened, and his time was spent chiefly in the country. He was subject habitually to head-aches. Pain in the head was the uniform consequence of every excess in drinking. He was bilious, nervous and very irritable: a hurt or accident was followed by sudden paleness and faintness. To remove syphilitic symptoms he had been frequently under the influence of mercury. Latterly his mind became unusually anxious and uneasy, as if something were preying upon it.

On the 28d of April (Wednesday) he fell on his side from a scaffold about eight feet in height; he was slightly stunned, but apparently not injured. A few minutes after, he became faint, and was obliged to lie down. In the course of the evening, the observation fell from him that his head was confused, and that he could not well attend to business. His head-aches were now more frequent. He was observed often to apply his hand to his head, as one who felt some uneasiness there.

On Friday, May 2d, the tenth day after the accident, he complained of slight rigors and general indisposition.

On Sunday he dined with a friend in town; drank moderately—rose early next morning, and, with a view to the removal of a slight head-ache, took some Cheltenham salts, which operated freely. He rode out to the country, ate a hearty breakfast, and was, whilst in the act of mounting

his horse, seized suddenly with violent pain in his head, darting through both temples, and from the occiput to the sacrum. He remained the rest of the day in bed, and could not shake off the pain.

On Tuesday there was an entire remission of pain : late in the evening it returned, and harassed him all night. On Wednesday also the remission was complete ; and in the evening he was again in great pain. On this day he was well purged ; his tongue was chalky white ; his urine somewhat high-coloured ; no sleep.

Thursday. Pain, though diminished in intensity, was unremitting ; pulse not accelerated ; no constitutional excitement. Leeches were numerously applied ; blood flowed freely from the orifices ; he was easily and abundantly purged ; no relief ensued ; night restless and sleepless.

Friday, May 9th. I saw him this day at four o'clock, for the first time since the commencement of his illness. He felt, he said, relieved by leeches, many of which had been in the morning applied. The pain was in his temples and forehead. He appeared much agitated ; was impatient when questioned ; complained chiefly of an entire deprivation of sleep ; sighed occasionally, and moaned often. Pulse natural ; skin cool ; bowels quite free ; abdomen soft ; tongue very white and moist. At eight o'clock in the evening, the pain became gradually so intense, that he entreated to be bled. His pulse had

now risen in strength and frequency ; he remained not a moment in the same posture, and seemed to suffer much. A vein was opened, and blood was allowed to flow till he grew faintish : he experienced considerable relief. Having lain quietly for about an hour, he left his bed suddenly, sat at the fire, and immediately fainted. The exertion of returning to bed re-established the pain ; he was restless and uneasy : he took twenty drops of laudanum, became still more restless, and at length slept for two hours. He awoke suddenly, complaining of much pain : there was an unusual degree of wildness in his countenance and manner. Pulse full and hard, not frequent ; skin hot. He was again bled ; and scarcely were eight ounces removed, when symptoms of syncope supervened. He was materially relieved, and lay quietly, but without sleep, till morning.

Saturday 10th. Symptoms very alarming ; pain intense, seated in the forehead, temples, and at both sides of the head, increased by the least exertion, even by the effort of speaking. When unexpectedly addressed, or touched with any cold substance, he was thrown into a state of great agitation : he complained of intolerable pain ; could not breathe freely ; a sort of convulsive struggle or catch affected the respiratory organs ; his sighs were deep and frequent. Pulse full, and hard, and 92 in a minute ; tongue loaded with a thick white secretion. Under these circumstances, bleeding was again resorted to. Twenty ounces were quickly removed ; there was but a slight tendency to syn-

cope; the symptoms were materially mitigated. but by no means subdued. At ten at night he was nearly in the same state as in the morning. In his extreme restlessness, he removed the bandage from his arm, and bled copiously. The relief was instantaneous. He passed a quiet though sleepless night. Ice was applied to his forehead, and every fourth hour a cup of the following mixture given: *R. Aq. ferv. ℥xii. Crys. Tart. ʒi. Ant. Tart. gr. i. Sac. albi ʒss. M.*

Sunday. He appeared much better; pain considerably abated. There was an evening exacerbation, but its severity was checked by the application of ice.

Monday. Still apparently much better: pain confined to one temple, and not severe: alvine discharges fluid, dark coloured, and copious: urine high-coloured. At midnight there was considerable pain in both temples, accompanied with much agitation and restlessness. Sixteen leeches were applied, and brought with them so much relief, that he himself thought the disease was quite removed: heaviness and numbness in the head were now the only sensations complained of. He did not enjoy any sleep.

Tuesday. Unceasing loquacity, peevishness, and irritability of temper formed the most striking features of the disease on this day. At night his intellect was, for the first time, affected; he spoke in-

coherently. In the morning he said he had been dreaming all night, and that his dreams had seemed realities. One small dose of medicine purged him largely.

Wednesday. Pain severe in the right temple; much sighing; agitation; great debility. Ten leeches were applied: he was rendered faint by the loss of blood; but the pain was entirely removed. After the application of the leeches the following symptoms were observed: muttering, and incoherent speaking; grinding of the teeth; incapability of motion; weak voice; questions answered slowly and difficultly; eye heavy; inattention to surrounding objects; memory evidently impaired. At the beginning of the night he appeared roused, and so far recovered as to be able for a while to converse: soon, however, he began to speak incoherently. When questioned about his feelings and disease, he answered quite rationally; at intervals he snored loudly. His tongue grew clean; his skin was cool, and pulse natural.

Thursday. Stupor, incapability of moving the body, grinding of the teeth, frequent yawning, unwillingness to speak: he was more collected and rational; fingers moved slowly and constantly over the forehead. When asked to shew his tongue, he continued for a long time to protrude and retract it: his countenance was remarkably changed, it assumed a deeply yellow tinge. Night spent without sleep,

without change of posture, in a continued stupor, with loud snoring.

Friday. He took food with pleasure. The upper half of his body was covered with profuse perspiration ; its smell peculiar and heavy. Much stupor and insensibility. At half past three, after the administration and full operation of a purgative enema, he was seized with convulsions. Upon recovering from them his sighs were deep, the intervals of inspiration more and more lengthened : his extremities felt cold : his pulse was indistinct, and by degrees imperceptible : and at half past four he expired.

In the commencement of the disease, the agony he endured was only to be relieved by general blood-letting : the blood did not exhibit any of the usual marks of inflammation. From first to last there was not the least irritability of the stomach : the mixture, containing emetic tartar, purged, but did not nauseate. The application of ice was attended with decided advantage ; it afforded so much relief, that the patient used himself to call for it. On Saturday a blister was applied to the back of the neck. On Sunday the head was shaved ; and at night a large blister placed on the back. His head was also blistered ; and on Wednesday night blisters were applied to the calves of his legs. The remedies did much to mitigate pain, and alleviate distressing symptoms, but nothing to remove the dis-

ease : its irremediable nature dissection sufficiently evinced.

**DISSECTION**,—Performed twenty-four hours after death. On raising the dura mater, a thin layer of coagulated blood, deposited between the arachnoid membrane and pia mater, extended on each side over a considerable space of the anterior lobes of the brain. A similar appearance was observed at the superior and posterior parts of the brain, under the parietal bones, and reaching downward to the occipital. Blood was likewise effused between the same membranes at the base of the cranium, and over the surface of the cerebellum ; a layer of blood was also deposited between the convolutions in every part of the brain. The lateral ventricles with their cornua, the third and fourth ventricles, were entirely filled with one large, continuous clot of dark blood : connected with this, another, as large as a walnut, occupied the inferior part of the left anterior lobe, into which a ruptured vessel, capable of admitting a small injecting pipe, opened. The quantity of coagulated blood in the interior of the brain amounted to several ounces : we were allowed to examine only the head. The dissection was performed by the Surgeon General in the presence of Doctor Crampton, Mr. M'Namara, and myself.\*

There is a form of jaundice, which appears in hys-  
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\* Mr. ——— was attended by the Surgeon General and Dr. Crampton.



terical women, and owes its origin most frequently to some commotion and disturbance of the mind. In the cases of this disease which I have witnessed, mental emotion always gave rise to it. The symptoms in the first instance would lead one to imagine, that the patient laboured under a violent attack of the bilious colic, or that a gall-stone was impacted in the ducts. It is necessary carefully to distinguish this affection from the bilious colic; inasmuch, as the treatment suited to each form of disease is extremely different. Since, however, it only attacks persons who have been subject to fits of hysteria, and is accompanied with great depression of spirits, the diagnosis is not very difficult. Of this disease Sydenham, in his *Treatise de Colicâ Biliosâ*, An. 1670, 71, 72, p. 186, has given a very just delineation. He describes it as "attacking women of a lax and gross habit of body, and such as have laboured under an hysteric affection, or such as have had their strength exhausted by difficult parturition. A pain not less severe than that of the iliac passion is felt at the region of the stomach, or somewhat lower, which is succeeded by copious vomitings of matter, sometimes green, sometimes yellow. To these symptoms are added a depression of mind, and despair, exceeding that in any other disease. After a day or two the pain subsides, but returns with unabated violence in a few weeks. It is accompanied sometimes with a remarkable jaundice, which, after a few days, spontaneously vanishes. The least commotion of the mind, whether it be anger or fear (to which such women are very sub-

ject) brings back the pain." He says afterwards that, in this form of Hysteria, the bilious colic is most accurately simulated. In the cases of this complaint which I have seen, serious mischief was done by mistaking the attack, in one instance for colic, in another for gall-stones. Where hysteria is at all suspected, the urine should regularly be observed: its limpid and copious secretion will often at once detect the real nature of the affection, and prevent all the injury resulting from needlessly active and vigorous treatment. The hysteric colic and jaundice are easily subdued. A few leeches, fomentations, moderate purgation, followed by opiates and tepid baths, will relieve the urgent symptoms; and in the cases which have fallen under my observation, change of scene, regular and wholesome diet, exercise on horseback, and mild aperients, have prevented their return. In these cases the subsiding of the pain was always accompanied with extrication and discharge of flatus, either upward or downward. It is singular enough that Heberden, so accurate an observer, should deny that there is such a disease as jaundice connected with hysteria, and blame Sydenham for having supposed its existence. By him the symptoms are referred to gall-stones:—indeed, in what he has written on the subject, he seems hardly to contemplate any other cause of Icterus.

I shall now quit this part of my subject, and go on to that which relates to the connexion subsisting between a jaundiced appearance of the skin, and a

morbid condition of the mucous surface of the bowels. In this form of disease, as well as in that already treated of, dissection leaves us either wholly ignorant, or much in doubt, as to the proximate cause of jaundice. Future observations may remove this difficulty; and we may yet know with certainty what it is that gives rise to Icterus, when it appears either after injuries of the brain, and emotions of the mind; or when it is connected with excitement and inflammation in the internal membrane of the bowels. Disease in the mucous surface of the stomach and small intestines is constantly overlooked. Its symptoms are often obscure; and it may, I doubt not, exist to a formidable extent, and yet leave no appearance, after death, indicative of its presence. A recent inflammation on the external skin seldom retains in the dead body any evidence of its existence. Of this I lately saw a striking proof;—a man, who had ulcers in his lungs, was seized two days before death with erysipelatous inflammation, affecting the face and scalp; the countenance was red, much swollen, and disfigured: within the space of a few hours after death, the colour had entirely forsaken the surface, and no trace of the inflammation, which had raged almost to the last moment of existence, was left behind. So it is with a morbid condition of the internal skin or membrane of the intestines; nor is it peculiar to those parts to be affected with disease, without leaving behind any perceptible change of structure;—the same happens in other organs. In this paper more instances than one have been brought forward, in which the brain

was violently affected; and yet the most accurate investigation could discover nothing to account for the symptoms. If, therefore, we wish to avoid error, we must not hastily conclude, that disease has not existed, because the scalpel has failed to disclose any morbid appearance. When disease, affecting the mucous surfaces, is complicated with jaundice, this last symptom is so prominent and glaring, that the other less obvious affection is usually disregarded. In like manner it often happens, that a patient is treated for general dropsy, and the obscure disease of the heart which has caused it, is overlooked. By repeated observations we shall be enabled to fix clearly in the mind, what the symptoms are, which indicate disease in the mucous membrane of the stomach and small intestines. It is an affection, which, like every other, has its peculiar and distinctive characters; and by carefully attending to these, the existence, and often the precise situation of the morbid action, may be satisfactorily ascertained. This, however, is a subject, which needs to be still further investigated; and our knowledge here, as well as in many other departments of medical science, will increase in proportion to the accuracy with which we observe symptoms before death, and appearances after; provided we can see the one and the other with an unprejudiced eye. The usual cause of that form of jaundice, the consideration of which will occupy the remaining pages of this paper, is the ingurgitation of cold fluids into the stomach, when the body is much heated; or sudden and reiterated exposure of the person after

severe exercise, to cold. In all such cases, the disease is not confined to the liver and its ducts ; but the mucous surfaces of some part, or all the intestinal canal, are involved in the same morbid action. It is even probable, that, in these surfaces, disease first establishes itself, for the patient is usually ailing for many days before jaundice appears ; and the symptoms of which he complains are amongst the number of those, which indicate commencing disordered action in some part of the villous coat of the bowels. The first case I shall relate is one of jaundice terminating in dysentery.

—— Bracken, labourer, æt. 55, was a strong muscular man. About a fortnight before I saw him, in consequence of unusually severe labour, he had been thrown into a profuse perspiration. Whilst in this state he drank large and repeated drafts of cold milk. The next day, and during several days, he felt himself cold, chilly, and so weak that he could no longer work as usual. Presently he was observed to be much jaundiced ; his strength forsook him, his appetite was gone, and his thirst not to be quenched.

I saw him on the 24th of July, and took the following note of the symptoms :—Occasional syncope—prostration of strength—deprivation of sleep—dimness of vision—vertigo—depression of spirits—frequent and deep sighs—palpitation—dyspnœa without cough—constriction at epigastrium, and intolerance of pressure—nausea caused by cold fluids

—complete anorexia—unquenchable thirst :—tongue moist, white in the middle, florid at the edges—skin and eye of a lemon-colour—disposition to clammy perspiration—urine without sediment, colouring a linen rag yellow—feces white—pulse 60, soft and full. Frequent and full evacuations from Epsom salts dissolved in a large proportion of water, followed by a purgative enema, produced a considerable abatement of the symptoms.

On the 29th of July, being much pained by pressure at the region of the stomach, sixteen leeches were applied, also mercurial friction (*Unguent. Hydrar. 3i. singulis diebus*) and *Sulph. Mag. ex. Inf. Ros.* were directed. After the leeches were removed, the bleeding was promoted by warm fomentations : he experienced very great relief, and felt (according to his own expression) light-hearted and comfortable.

On the 1st of August he complained of an appetite so craving, that scarcely any quantity of food was sufficient to remove the sensation. He had not, he said, ever before felt so keen a desire for food : the thirst was abated—skin less deeply coloured—margin of tongue intensely florid, centre white and loaded—urine very bilious—skin moist—distressing debility.

August 2. Appetite still craving—vertigo—dimness of vision—sleeplessness—heat of fauces—mercurial tor—costiveness—slow pulse. An ounce of

Inf. Sen. with ten grains of the Elect. Scammon. repeated a few times, at intervals of three hours, opened the bowels fully.

August 4. He informed me that he had felt, these few evenings past, a pain in the temples and forehead, which came on gradually at the close of the day, continued during the early part of the night, and subsided towards morning. He was much better—his stools were darker coloured.

August 6.—Occasional rigors—white feces—pain at epigastrium—thirst—total loss of appetite—periodic pain of temples and forehead—tongue coated and very red—ill taste—slow pulse. I learned accidentally that medicine (the nature of which I could not ascertain) had been privately administered by a friend, who had undertaken to cure him. Blood was taken from his arm; leeches were applied; the bowels were opened: by these means all pain was removed from the head and epigastrium; the tongue however became dry and brown in the centre, and was still highly florid at the margin; the pulse was weak, and there was much languor and debility. He felt, he said, as one intoxicated. There was a diminution in the quantity of urine, as also some pain in the lower belly, which was removed by an enema and warm fomentations.—*Haust Anod. singulis noctibus.*—*Bal. Tep.*

August 12. Stools destitute of bile—eyes and skin deeply tinged—appetite extinguished—thirst urgent

—great distress from flatulency—sleep produced by the anodyne draught—much relief and comfort from the tepid baths.

September 3.—Stools still clay-coloured ; they were now tinged with blood, became very frequent, and were accompanied with pain and tenesmus : the abdomen was not in any part painful when pressed—flatulency encreased—eyes and skin still deeply tinged ; scarce any appetite—much thirst—weak pulse—prostration of strength. Leeches to the lower belly, succeeded by warm fomentations, and afterwards a blistering plaster, with repeated doses of the Dover's Powder, afforded considerable relief ;—his diet restricted to wheaten flour and rice, boiled in milk. The dysenteric symptoms having disappeared, he continued for several days in an apparently improving state ; when rather suddenly, towards the end of the month of September, dysentery returned with extreme violence ; the stools were very frequent, fetid, dark-coloured, and full of coagulated blood : the jaundice was unabated. His sufferings, from the frequency of the stools and the violence of the tenesmus, were extreme ; the bed-coverings and his lower extremities were all smeared with blood. In this state of suffering he lingered for many days, and on the 8th of October, at three in the afternoon, expired.\*

\* This patient contrived frequently to evade taking his medicines. Mention is here made of such medicines, only, as it is pretty certain he did take.



The following morning, at nine o'clock, the examination of the body took place. The body was very much emaciated : a deeply yellow tinge pervaded the whole surface. The peritoneum, in every part, was coloured with bile : in its cavity there was a deposition of yellow fluid, in which flakes of lymph floated ; the liver was shrunk, and retracted considerably within the margin of the ribs ; the stomach was distended, and presented externally a very vascular appearance. The peritoneal coat of the large and small intestines was in extensive patches, vascular, opaque, and thickened. The vessels of the mesentery crowded together, and dilated. The cardiac portion of the internal surface of the stomach presented no unusual appearance ; on approaching the pyloric extremity, the inner membrane was highly vascular, and a large patch was quite black. On laying open the duodenum, its surface presented a still more vascular appearance. This vascularity was extended along the whole tract of the small intestines, and was particularly evident upon the surface of the *Valvulæ conniventes*. The contents of the small intestines were every where mixed with bile. The ileum, near the *caput coli*, presented a highly inflamed appearance, and its contents were of a chocolate colour. The whole internal surface of the *caput coli* was deeply ulcerated, and covered with purulent matter ; its coats were thickened : this gut was full of black, foul, and rather solid feces, mixed with clots of pure blood. The colon and rectum were ulcerated and thickened in numerous patches throughout their whole extent.

Wherever the ulcerations were most extensive, there the contained matter was most solid, foul and black; clots of black blood were every where mixed with the contents of the large intestines. The liver was diminished in size; fleshy excrescences grew from its convex surface; to the touch it was remarkably flabby and inelastic; its vessels very much dilated; its colour at every section intensely yellow. The gall-bladder contained several ounces of dark green bile; its duct at the superior part was contracted to a very small size. The remaining portion of the cystic duct was considerably dilated; as were the hepatic and common ducts, which were unobstructed. Wherever the liver was cut, green bile flowed from the enlarged ramifications of the hepatic ducts. The spleen was shrivelled, and possessed less tenacity than the crassamentum of healthy blood. The kidneys were flaccid and small, and all their vessels dilated. The viscera of the thorax were carefully examined, and did not present the least morbid appearance. The dura mater was yellow; some (but very little) fluid in the ventricles; the brain remarkably firm and healthy. Of the contents of the cranium the dura mater alone was discoloured.

Drawings were taken on the spot, exhibiting accurately the appearance of the mucous surface of the stomach, duodenum, ileum, and caput coli. These appearances, combined with the symptoms during the progress of the disease, leave no room to doubt that the morbid action was not confined to the

liver and its ducts, but was propagated along the whole mucous membrane, from the pyloric extremity of the stomach to the termination of the rectum. The symptoms during life, which particularly indicated this state of the intestinal canal, were the deeply florid tongue; the unquenchable thirst; the epigastric tenderness; the state of the appetite, which was either wholly extinguished, or morbidly craving; the great prostration of strength; the rapid emaciation; and lastly, the dysentery. The canine appetite is a symptom which claims attention. I have met with frequent instances of it. Of the Diabetes mellitus it forms a prominent feature, and is often present in cases of deranged digestion. A man died not long since in hospital, who was kicked by a horse upon the region of the stomach: frequently afterwards he vomited blood. He was reduced to the utmost state of emaciation; he was deadly pale; his skin harsh and dry; his pulse frequent, small and feeble; his tongue intensely florid, clean and glazed; a thirst, which could not be quenched, combined with an internal feeling of burning heat, harassed him continually; he had incessant vomiting, and was occasionally delirious. This man, a few days before his death, had a most craving and ravenous appetite, and ate greedily of broiled mutton, which was the only aliment that remained upon his stomach. Towards the conclusion of his illness he had cough, dyspnoea, and purulent expectoration. In Bracken's case, it is not easy to say what may have been the immediate cause of the jaundice. Inflammation in the mucous membrane of the duo-

denum will not account for this symptom. I have seen this membrane not only inflamed, but extensively ulcerated, without the least bilious tinge on any part of the body; nor was there, in this instance, any thing in the condition of the liver to which its origin could be traced. The most probable explanation is, that the inner membrane of the ducts was inflamed, and thrown thereby into a state of spasmodic contraction. In inflammation of the mucous membrane of the intestines, or in an inflamed state of the liver, jaundice will probably not be present, unless the ducts likewise partake in the diseased action. In either case, so long as the ducts are exempt from disease, the descent of the bile is unimpeded, and that fluid is not absorbed; but when these are in a state of excitement or inflammation, the natural stimulus of the bile, instead of producing in them the moderate contraction necessary to propel the fluid, causes so great a degree of contraction as altogether to hinder the descent of the bile into the duodenum, and thus gives rise to jaundice. This part of the subject is so well illustrated by the following case and dissection, extracted from Dr. John Hunter's *Treatise on Army Diseases*, Page 197, that I shall insert the whole of it.

“ In the body of a person who died of pulmonary consumption, I had lately occasion to observe some things not altogether foreign to the present subject. A few days before death, to the common symptoms of the disease, was superadded a jaundice. The lungs were found diseased in the usual manner;

there were adhesions to the pleura, tubercles, indurations, and suppurations in their substance. In the abdomen there were marks of superficial inflammation all over the liver; and the lower surface of it was united to the stomach by adhesions. The gall-bladder was full, but no bile could be squeezed out of it. On laying the ductus communis open from the duodenum, it was found filled with bile of a brown colour, and of a thick ropy consistence, as were also the ductus hepatici. Part of the ductus cysticus was laid open, and the gall-bladder was pressed with considerable force, but still no bile flowed. Through a blow-pipe, introduced into the duct, the air at last with some difficulty was forced into the gall-bladder; after which, by pressing again, a coagulum of bile was squeezed out, and what followed was ropy and black, like melasses. On laying the duct open all the way to the bladder, there appeared no other obstruction of the bile than the coagulum; which, as well as the thick and ropy state of that secretion, appear rather to have been the effects of stagnation, than a cause of obstruction in the first instance. *Did the inflammation in the neighbourhood of the ducts, and perhaps extending to them, excite such contractions in them as obstructed the bile,* in the same way that a suppression of urine is sometimes a consequence of inflammation in the urinary passages?"

If the opinion be correct, that this form of jaundice (I mean that arising from cold applied to the heated body) is generally, or perhaps uniformly, complicated with an highly excited and sometimes

inflamed state of the mucous membrane of the bowels, it must follow of necessity, that the plan of cure should be directed, not so much to the condition of the liver, as to that of the neighbouring viscera. In all cases of what may be termed recent or inflammatory jaundice, in which, combined with the other symptoms, there is tenderness and fulness at the epigastrium, the treatment should be primarily and essentially antiphlogistic : bleeding, general and local ; saline purgatives largely diluted ; general and local tepid baths, should uniformly precede the use of mercury. I have seen cases of this kind, wherein the mercurial treatment had aggravated every symptom, yield at once to a bleeding from the arm, followed by the application of a few leeches. This I have observed, even where the pulse was not accelerated.

Ulcerations are much more frequently found in the large than in the small intestines. May not this be caused by the irritation of the foul matter lodged in the colon and rectum, when their internal membrane is inflamed ? That either scybala, or offensive feces, lodged in those parts are a *cause* of dysentery, I do not at all mean to assert. But when, from other causes, inflammation has once set in, I think it very probable, that there is here a source of additional irritation, which will account, at least in part, for the greater rapidity with which the large intestines run into ulceration. The difference in colour, smell and consistence, between the matter at the termination of the ileum,

and that at the commencement of the colon, where the valve alone intervenes, is very remarkable. In Bracken, the ileum at its termination was highly inflamed, but not ulcerated; whilst the whole caput coli was one mass of ulceration. The contents of the ileum were soft and without smell; those in the caput coli comparatively solid, and highly offensive. Hence the value, in practice, of restricting the dysenteric patient to such nutriment as shall deposit in the large intestines the least possible portion of feces.

I shall briefly relate a case or two more of this form of jaundice.—Mc. Guinness, æt. 30, labourer, admitted into hospital on the 31st August. This man was in a condition of extreme poverty; his diet had consisted very much in salt fish. Several weeks previously to the date of his admission, having been obliged to work laboriously and almost unremittingly the greater part of a summer's day, he drank large and repeated draughts of cold water. On the following day he was universally jaundiced: he also felt pain and heat at the epigastrium, and towards the right hypochondre, with much thirst. Afterwards he discharged blood, both by vomiting and stool, and presently purple petechiæ began to appear on several parts of his skin. A few days after his admission the following note was taken of his case.

The upper half of his body is thickly strewed with blackish spots, distinctly circumscribed, about an eighth of an inch in diameter. Similar spots are

scattered upon the lips, tongue and fauces. There is a small, superficial, unhealthy ulcer at each internal angle of the mouth. The gums are ulcerated and bleeding : Pulse 104, small and weak ; urine scanty, turbid and offensive. The skin and countenance sallow and bloodless, but not bilious. The right lobe of the liver may be distinctly traced, descending about two or three inches below the margin of the ribs. He is free from cough and dyspnoea. He complains of thirst, which annoys him chiefly during the night ; he has scarcely any appetite ; is languid and weak ; has a dry and husky skin, with considerable œdema of the lower extremities. By improved diet, small doses of *Sulph. Magn. ex Infus. Ros.* and water, slightly acidulated with vitriolic acid, a gradual subsiding of every morbid symptom was produced. The petechiæ disappeared ; the ulcers in the mouth and gums were healed ; the thirst ceased ; the urine became natural ; and his health, strength, and appetite were amended. Afterwards minute doses of the blue pill, with a succession of small blisters to the right hypochondrium, brought about a diminution of the size of the liver ; and he was discharged from the hospital with his general health very much improved. When I first saw this man, the symptoms bore an accurate resemblance to those which characterize the sea scurvy. In him the immediate exciting cause of the jaundice was cold applied to the inner surface of the stomach, when the body was much heated. This fact, the passing of blood upward and downward, the local pain, the internal heat, the thirst, the peculiar



colour of the skin, and the purple spots, lead me to think that the inner membrane of the stomach, and probably some part of the small intestines, were involved in the morbid condition of the liver and its ducts.

Among the symptoms indicative of disease in the Chylopoietic viscera, I am disposed to include the petechial spots. In several cases which I have lately witnessed,—cases in which no morbid appearance could be discovered, except in the mucous membrane of the intestines,—besides the ordinary symptoms, such as redness of the tongue, intense thirst, epigastric tenderness, internal heat, rapid emaciation, dry skin, oppressive debility, nausea and vomiting, there appeared, toward the conclusion of the disease, sometimes large blue or livid patches\* upon the skin, and in many instances purple petechiæ. This appearance has so frequently occurred, in connexion with the symptoms just stated, that I have latterly been inclined to adopt the opinion, that it is symptomatic of a morbid condition of the villous coat of the bowels. Whether the petechiæ of fever may or may not be referred to this source, I shall not now inquire; but shall proceed to state a few cases, in which these spots and patches on the skin appeared in a remarkable manner.

I attended a young woman some months since, the upper half of whose body was covered with large

\* This appearance is observed in the severest forms of the yellow fever.

blue patches, so that her appearance was most extraordinary.\* Her disease was caused by sudden

x 2

\* This case of the *Purpura Hæmorrhagica* was one of peculiar interest. The appearance of the skin and face was so remarkable, that I had a drawing taken of it. In this patient the tongue was clean, smooth, and of a bright red colour: towards the termination of the disease, this brightness of colour gradually faded away. Before her death there was infiltration into the cellular membrane, and into all the cavities. She died comatose. Perhaps there is not any symptom more characteristic of this affection than the loss of muscular energy—the overwhelming debility—which in severer cases accompanies it: even in the mildest cases it is attended with much languor and depression of spirits. During the whole course of this girl's illness (which lasted four months) she complained of little else than extreme debility. Epigastric pain and fulness suggested the application of a few leeches: the bleeding could scarcely be restrained; she was however relieved by it. It is safer, in this disease, to remove blood by the lancet than by leeches. I am indebted to Mr. Cusack, Surgeon to Stevens' Hospital, for an opportunity of observing a very interesting case of *Purpura*. The patient is a strong, and apparently healthy woman. Small petechiæ, and large purple patches appeared suddenly whilst she lay in bed, and were ushered in by a troublesome itching of the skin. The symptoms are præcordial oppression, anorexia, thirst, and debility. A large tumour (evidently caused by flatus) existed for some time in the left hypochondrium. Profuse and frequent nasal hæmorrhages ceased altogether after a bleeding from the arm. In the *Edin. Med. and Sur. Jour.* for Jan. 1819, Dr. Parry of Bath relates two cases of *Purpura*, cured by venesection. Dr. Bateman, in his *Synopsis of Cutaneous diseases*, 2d Edition, p. 109, mentions a case of *Purpura Simplex* in a feeble woman, of which the symptoms disappeared after a severe catamenial flooding. With this agrees the experience of those in this city with whom I have conversed, who have had most frequent opportunities of treating this disease. In fever I have repeatedly observed

and extreme alternations of heat and cold. On dissection I found the spleen greatly enlarged, and gorged with black blood: the mucous membrane of the stomach and small intestines overspread with extensive spots of ecchymosis: great dilatation of the vessels of the mesentery, and enlargement of its glands. These were the only morbid appearances.—A boy was sent to me, affected with frequent fainting fits, and loss of voluntary power in the lower extremities; the surface of whose left limb was painful when touched, and discoloured with large yellow and blackish patches, as if he had been beaten and bruised. This boy was emaciated; continually picking at his nose; he was very pale; had a florid tongue; much thirst; and drank cold fluids eagerly. His skin was harsh and dry; his sleep disturbed and uneasy, accompanied with a grinding of the teeth; his appetite capricious: his bowels were described to be regular. Before I saw him he had ineffectually used hartshorn drops, and warm baths. I directed for him three grains of scammony, and the

the petechial spots to disappear after blood had been taken from the arm, and leeches applied to the head or epigastrium. This I have likewise seen after the full operation of an active purgative. In some instances these remedies change the colour of the spots from a purple or livid, to a lighter and more florid hue. In the cure of Purpura, the remedies to be relied on are, blood-letting at an early stage, and purgatives and opium during every stage of the complaint. Afterwards much benefit will result from change of air, light tonics, with the vegetable and mineral acids sufficiently diluted. Judging from the symptoms, the warm bath I should conceive a good remedy: of its utility I cannot speak from experience.

eighth of a grain of calomel, rubbed together with sugar, to be taken every third hour. The powders operated fully; the stools were very offensive; and a large lumbricus was voided. A few hours after the full operation of the medicine the blue patches disappeared; and the boy's health was gradually and completely re-established.—I lately saw an interesting case of a young woman, who was, at the period of menstruation, greatly terrified by a robber suddenly entering the room in which she lay. Months of ill health had elapsed before I saw her. Her strength was prostrate; she was deadly pale, and very much emaciated: there was much pain and fulness at the epigastrium; the bowels were costive; the urine scanty; the skin always dry; the pulse quick and feeble. There was also oppression at the cardiac region; palpitation, and a total want of refreshing sleep. She continued many weeks in this state: at length dysentery came on, attended with much pain on pressure throughout every part of the abdomen: the stools were very frequent, painful, and accompanied with tenesmus; latterly they consisted of little else than blood. A few days before her death, the upper half of her body was strewed with large petechial spots, which, on her face but not elsewhere, were somewhat elevated above the level of the skin. The morbid appearances, as related to me, were adhesions between the pericardium and surface of the heart; and also between the pleura and left lung; an universally inflamed appearance of the peritoneum; with effusion of a puriform fluid into its cavity: the whole mucous membrane of the

small and large intestines loaded with blood, and of a chocolate colour. These are a few, amongst many cases of this kind, which I have witnessed. Whether the petechial spots, and the diseased action in the chylopoietic viscera, are to be considered as connected together in the relation of cause and effect, or as merely coexistent, and unconnected the one with the other, future observations alone can determine.\*

To the cases of jaundice, arising from the application of cold to the heated body, which have been already related, I shall add one more; that of a young unmarried woman, who, at the time I saw her, had been ten weeks affected with jaundice. During that space of time the catamenia had not appeared. Her occupation subjected her to sudden exposure to cold when much heated. Upon one occasion, whilst perspiring profusely, she drank largely of cold water. Soon afterwards she felt a

\* Since writing the above, I have met with some remarks on this disease by Dr. Harty of this city. The symptoms of the cases related by him, combined with the excellent effects resulting from a purgative plan of treatment, support the opinion that the seat of the disease is in the *primæ viæ*. He mentions a case, the symptoms of which appeared immediately after an attack of cholera. Hence he was induced to make trial of cathartic remedies. The liberal exhibition of calomel and jalap was productive of the most salutary effects. Dr. Harty's observations on this disease deserve an attentive perusal. They are to be found in the 34th number of the Edin. Med. and Surg. Journal.

sensation of burning heat at the region of the stomach, for which she sought relief in large draughts of the coldest fluids. This sensation was accompanied with thirst, vomiting, also with pain on pressure and a feeling of constriction at the epigastrium. When I saw her these symptoms were much increased; she complained also of want of sleep, palpitation, slight dyspnoea, and excessive debility. Her flesh was wasted; her skin very dry; there was not, since the commencement of her illness, the least tendency to perspiration; the urine thick, turbid, and loaded with bilious matter; the feces were lumpy, ash-coloured and untinged with bile. No food except flummery remained on her stomach. The pulse frequent, soft and regular. The edge of the liver could be traced with tolerable distinctness, considerably below the margin of the ribs; she was very deeply jaundiced. From the application of ten leeches to the region of the stomach, she experienced great relief. Half a grain of opium at bed-time always procured for her tranquil sleep. Large quantities of lumpy feces were carried off by injections of warm water and castor oil. She took every night five grains of the *Pil. Hyd.* and effervescing draughts were given in the course of the day. Her only nourishment was flummery. Wine whey was directed for her. She became, however, gradually more and more debilitated; and after lingering for several days, with scarcely any variation in the symptoms, she at length died suddenly, whilst making an effort to vomit. The cause, the symptoms, and the progress of the disease in this female, resemble so

accurately, in every essential feature, those of the cases already related, that an identity of morbid action may reasonably be inferred. I have to regret that the body was not examined. The symptoms, however, induce me to look upon the case as a good specimen of the form of jaundice which I have been attempting to describe; a form in which, as I conceive, the liver and the secreting surfaces of the stomach and small intestines are simultaneously involved in morbid action. Nor is it in such cases only that this complication of disease takes place; we shall find that it also belongs to many other affections of the abdominal viscera:—to the cholera morbus, for example; a disease which prevails chiefly during the autumnal season, when the alternations of heat and cold are sudden and frequent; and which does also occasionally arise from drinking cold liquors, when the body is heated by labour or exercise. It owes its origin less frequently than is imagined to the nature of the food taken into the stomach. Vomiting, thirst, internal heat, are amongst its prominent symptoms: there are also griping pains and frequent stools, which indicate the presence of morbid action in the mucous coat of the large intestines. In many, who have died of cholera morbus, the marks of inflammation in the villous coat of the bowels have been unequivocal:—so much so that they are not distinguishable from the effects of a corrosive poison. In this disease, the functions of the liver are so much deranged, that all the symptoms have been traced by the older writers to the irritating effects of a redundant secretion of acrid

bile: That the hepatic functions are greatly deranged, is certain ; but that the symptoms are caused by the action of the bile upon the mucous surfaces, is now, I believe, acknowledged to be an erroneous opinion.\* In treating cholera morbus, the supposition that bile is the cause of all the mischief, has led to the adoption of remedies ill calculated to check the progress of this formidable malady. The patients have been deluged with diluting drinks ; and even emetics and cathartics have not been withheld. When it is considered that there is a cold stage, antecedent to that of re-action and excitement ; and that the vomiting and purging exist for hours before bile appears in the matter ejected ;—it must be evident that there is an highly excited state of the mucous surfaces, wholly independent of the biliary secretion. The cause of the cholera morbus, the symptoms, and the appearances after death, evince that the disordered action affects both the intestinal mucous surfaces, and the liver.

In dysentery the disease is often confined to the large intestines ; more frequently the small are likewise involved. It is not uncommon to find the

\* See Doctor Johnson's Treatise on Derangements of the Liver, Internal Organs and Nervous System, page 49. In this work, as well as in a former one, entitled the " Influence of Tropical Climates on European Constitutions," correct views of the Pathology of the Cholera Morbus have been put forward. The profession is, I believe, very much indebted to the author of these works, for the correction of various errors respecting the nature and treatment of this disease.



liver, in those who have died of dysentery, extensively diseased.

Typhous fever is more frequently complicated with a jaundice in southern latitudes, than in this our colder climate. The few cases of it which are to be observed in this country, occur generally during the autumn months. I am informed by Dr. Cheyne, that in several cases of the Typhus Icterodes which he has seen, large discharges of blood by stool took place. Hence it seems probable, that when jaundice accompanies a continued fever, the abdominal mucous surfaces will be found in either an excited or inflamed condition.

The bilious remittent fever of warm climates is another form of disease, which appears to me to belong to the subject under consideration. If the leading symptoms of this affection be carefully reviewed, and these again compared with the appearances exhibited on dissection,\* it will be evident, that this malady ought to be classed amongst those, in which the force of the attack falls principally upon the inner tunic of the stomach and duodenum. This (there is now little doubt) is the most constant seat of the disease. And when we consider how abundantly these surfaces

\* See Dr. Bancroft's Essay on the Yellow Fever, pages 20, 21, 22, particularly his observations on the symptom called the Black Vomit, page 23.—See also Observations on the Diseases of the Army in Jamaica, by Dr. John Hunter, pages 196, 201, &c.

are supplied with nerves and blood-vessels, how essential to life are their functions, and how widely extended their sympathies,—it will cease to be a matter of surprise, that disease invading these organs should give rise to symptoms the most formidable, and should even destroy at once the vital principle. As most diseases derive their names from some prominent symptom, so in this instance the jaundiced appearance of the skin has obtained for it the appellation of the Yellow Fever. This yellowness of the surface, which proves that the biliary system has likewise suffered from disease, is a very constant, but not by any means a necessary symptom. The warmer the climate is, the more certainly this symptom is present. In countries or districts where there is much heat during the day, where there are also heavy and noxious vapours by night, these fevers always rage. In colder climates they seldom appear, except during the autumnal months, when the heat of the day promotes perspiration, and the coldness of the night chills the surface.\* It would appear then, that very similar causes give rise to the cholera, the dysentery, to intermittent, remittent, and bilious fevers,

\* It is remarkable that the chilling of the body in a cold, dry climate, gives rise to acute diseases; such as inflammations of the pleura, pericardium, peritoneum, and synovial membranes: whereas in climates, where the heat during the day excites perspiration, and marshy exhalations chill the surface, bilious remittents, intermittents, dysentery and cholera morbus prevail. Can it be that in the first sort of climate the serous membranes are prone to inflammation, and in the second, the mucous?

These affections also resemble each other in many of their leading symptoms, and are most probably but modifications of the same disease :—in all of them, the villous coat of some part of the intestinal canal is the principal seat of morbid action.

There is yet one form of disease of very frequent occurrence, the seat of which is in the villous coat of the stomach and small intestines. That to which I allude is the “ Infantile Remittent Fever,” or as it is vulgarly termed, the “ Worm Fever” of children. This disease is essentially the same as the bilious fever, or the more mild bilious disorder of adult age, but modified by the time of life, and other circumstances. Its characteristic symptoms, if closely analyzed, will be found all of them to point to the mucous surface as the original seat of morbid action. Irritation at the extremity of this membrane, as at the nose, lips, eye-lids, or verge of the anus, is a very constant symptom : the state of the skin, urine, appetite, and bowels, the defect of nutrition, with other symptoms, all lead to the same conclusion. In almost every instance of the disease the symptoms do likewise afford evidence of disorder or disease in the hepatic system. The tendency of affections of these membranes to assume an intermittent or remittent type is a very curious circumstance, and one of which no satisfactory explanation has as yet been proposed. Inflammation of the conjunctiva of the eye and lids possesses occasionally a distinctly remittent character. The symptoms of an intermittent are now and again produced by irritation in the urinary

passages. Affections of the mucous membranes often run a very protracted course, and yet leave behind no material change of structure.

In the "Bilious disorder," or, as it might more properly be termed, the "Gastro-hepatic disorder," so frequent in these countries, the derangement of function is not restricted to the liver : it takes a wider range ; and includes, within the sphere of morbid action, those important viscera which are situated near that gland, and from whence the nutritive particles, which supply the whole body, proceed. By a modern writer of great eminence this complaint (which assumes so great a variety of forms) has been named "the disorder of the Chylopoietic viscera : " the name implies the existence of derangement of function in those surfaces where the food is converted into chyle, and thus far the name carries with it a just conception of the nature of the complaint. It corresponds also with the extent to which our knowledge at present reaches ; for until we shall be further informed on the subject, and learn to distinguish by the symptoms the precise part or parts of the Chylopoietic viscera affected with disease, we must be content to retain a name which is not very limited and precise in its import.

Such are the considerations, which the form of jaundice here treated of has suggested. The number of diseases, whose seat is in the liver and mucous membrane of the stomach and small intestines,

is very great. Of these diseases some are mild and easy of treatment, some exhibit symptoms of a more formidable nature ; and others run a course so rapid, as too frequently to baffle the best directed efforts of the healing art.

**A CASE**  
**OF**  
**DISEASED HEART,**  
**WITH OBSERVATIONS.**

**BY THOMAS CUMING, M. D.**

**LICENTIATE OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS,  
AND ONE OF THE PHYSICIANS TO THE DUBLIN GENERAL  
DISPENSARY.**

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**THE** subject of the following case was a man 38 years of age, by trade a glover. He was rather of a spare habit of body, somewhat below the middle size, and, when I first saw him, December 6, 1820, he appeared slightly emaciated by illness. He told me that about the latter end of September preceding he was seized one day, while walking along Lower Ormond-quay, with a severe pain in the middle of the sternum, attended with a still severer pain in the bend of the left arm. The sensation was so distressing that he was obliged to stop and go into a public house, where after resting about twenty minutes, the

symptoms gradually went off. In the public-house he took a glass of spirits and water. While walking homewards he was seized again with a similar pain in the breast and arm; and although he felt as strong an inclination to stand still as in the first instance, he made an effort to overcome it, and by the time he reached his lodging the paroxysm had nearly subsided. About three days afterwards, when drinking punch with some friends, he had a recurrence of the pain in the breast and arm. Upon going into the open air, however, the uneasiness was soon removed, and he passed the remainder of the evening without inconvenience.

In the course of two days after this last attack, he was awakened out of his sleep about 2 o'clock in the morning, by a recurrence of the pain in the breast and arm: the paroxysm in this instance was attended with a sense of tightness in the chest, severe dyspnœa, and violent pulsation of the heart and larger arteries, particularly the femoral, carotid, radial and temporal. After continuing about an hour the fit gradually went off; but at five o'clock he was seized again with a paroxysm which lasted about the same time, and was in every respect similar to that with which he was attacked at 2 o'clock. From this period until the time I saw him, he had generally about two paroxysms every morning, at 2 o'clock and at 5. They were attended with precisely the same symptoms, and generally lasted about an hour. During, and in the intervals of the paroxysms, he had constant pulsation of the heart and

large arteries; and the pulsations were so strong as to be visible from a considerable distance. Upon applying my hand I felt a strong pulsation over the whole left side of the chest, which extended into the epigastric region, and from that downwards for some way below the umbilicus. The pulse at the wrist was regular, full, hard, and vibrating. For some days previous to my first visit he had observed slight œdema of his feet towards evening; and when I saw him his face, though by no means œdematous, appeared somewhat fuller than from the corresponding appearance of the rest of his body might have been expected. Urine rather scanty, and high coloured; appetite indifferent. Some degree of thirst; bowels liable to be confined. He could lie with more ease on the right side than on the left. He could not attribute his ailment to any particular cause, unless it might be to cold which he received by sitting exposed to the air from an open window. Since the commencement of his illness he had been occasionally subject to flatulence, and the fit had sometimes terminated after the expulsion of wind from his stomach. He had been subject to occasional cough in winter for several years preceding this attack; and since the commencement of his illness the cough had been more than usually troublesome, and attended with considerable mucous expectoration. Though in general a man of temperate habits he had occasionally indulged to excess in ardent spirits, and had frequently laboured under irregularity of bowels, being alternately affected with constipation and diarrhœa. I think it necessary to



mention, that he had been in the habit of playing a good deal upon the flute, and sometimes of singing.

Before I saw him he had been bled twice, and blistered on the chest four times. He had taken purgative pills occasionally, and draughts composed of tinctures of digitalis and hyosciamus, laudanum, and antimonial wine. He thought the bleeding and blistering had relieved the cough, but he could not perceive that any impression had been made upon the paroxysms or pulsation. The diet on which he had principally lived since the commencement of his illness was coffee and tea, with toasted bread, to breakfast, and sometimes a little lean mutton or veal to dinner.

With a view to reduce the action of the heart and arteries, I directed him to confine himself as much as possible to vegetable food, to abstain entirely from the use of spirituous or fermented liquors, and to avoid, as well as he could, all causes of mental or bodily agitation. As the bowels were liable to be confined, I found it necessary to prescribe aperients repeatedly, and though no decided or permanent effect was made on any of the prominent symptoms, I always observed considerable diminution of uneasiness after free alvine evacuations.

Blisters to the chest afforded some relief to the cough, but notwithstanding their application, the

use of *digitalis* in larger quantities, and the insertion of a seton in the side, I could not perceive any favourable change, either as to the frequency of the paroxysms, or as to the constancy and violence of the pulsation. On the contrary, from the 7th to the 23d of December, he had seldom less than two, frequently three or four paroxysms throughout the night, and occasionally as many throughout the day.

The pain of the arm was at times so excruciating as nearly to induce delirium; and whenever this was the case I observed he had but little corresponding pain of the sternum. On some occasions he had slight pain of the arm without any pain of the sternum. During the paroxysms the face was generally pale, and the body bathed in perspiration. Frequent attempts to expel flatus from the stomach generally attended each paroxysm, and he always felt considerably relieved after its expulsion. Although the pulsation was always strong, and communicated a vibratory motion to the bed clothes, it was more violent during the paroxysm. His sufferings during the paroxysm were not aggravated, as in the case of angina pectoris, when he walked about; and when seized with it at night he was always obliged to sit up immediately in bed.

On one or two occasions the pain of the arm was relieved by immersing it up to the middle in warm water, and by having it rubbed and grasped strongly. Friction to the chest generally af-

forded relief to the pain of the chest and arm. An opiate at bed time, and an anodyne antispasmodic mixture, had no effect whatever on the paroxysms; and the pain of the arm was in no wise relieved by rubbing it with ammoniated liniment.

On the 23d December the gums became a little sore from some calomel combined with ipecacuanha, which he commenced taking on the 19th. His urine had increased in consequence, and the œdema, which had been considerable, was less. The paroxysms however continued as before. From the 23d of December till the 1st of January the paroxysms were less frequent and severe. The sense of pulsation was continually less distressing, and at times he felt almost entirely free from it. He thought himself much better, and was sanguine in his expectations of recovery. The cough, however, was still very distressing.

On the evening of the 1st of January he was seized with a violent fit of coughing, which continued without intermission till 2 o'clock of the following morning, and obliged him to sit up in bed. From this hour till 7, he laboured under incessant dyspnœa, with gasping for breath, and the cough was very distressing, though not so frequent as in the fore part of the night. In several nights after this attack he was obliged to sit in a chair, propped up by pillows, from a sense of impending suffocation

whenever he attempted to lie in the horizontal position.

From the commencement of the asthmatic attack the nightly paroxysms had occurred but seldom, and were very slight. He suffered much, however, from dry cough; the quantity of urine was diminishing, and the œdema of feet increasing. On the 3d January a grain of squills, with half a grain of digitalis, and about three grains of extractum cicutæ was directed to be taken three times a day. On the 10th the gums were a little sore, and he was able to lie at intervals on his side. Urine increased; œdema less; pulsation not so distressing, and less visible. From 12th to 19th no return of the paroxysms or asthmatic attack. On the 23d he had a recurrence of the paroxysms, attended with dyspnoea, and a sense of tightness and oppression in the chest. From this date until the 7th of February the symptoms were increasing in severity. The abstraction of 10 oz. of blood failed to procure the slightest alleviation of his sufferings. On the evening of the 11th he was seized with an excruciating pain of the epigastrium, fluttering about the heart, severe cough and difficulty of breathing, which obliged him to sit, for the most part, in the erect position. On the 12th I found him sitting up in bed, his countenance pale and anxious, and bearing all the appearance of great exhaustion. He was aware of his danger, and expressed a fear that he should not be able to survive such another night. His fear was but too well founded, as he died at 4 o'clock on the morning of the 13th.

In some hours previous to death he had constant retching, attended with the expectoration of dark blackish-coloured sputa.

The body was opened by my friend Dr. Charles Johnson, in presence of Dr. Mills, Dr. Mollan, Mr. Abell, and myself. The following account of the appearances on dissection was drawn up at my request by Dr. Johnson, who, as well as Drs. Mollan and O'Reirdon, had occasionally seen the patient with me during his illness.

#### EXTERNAL APPEARANCES.

There was neither lividity nor œdema of the face, hands, or feet, but the body shewed a tendency to run rapidly into putrefaction.

#### THORAX.

The right side of the chest contained from 6 to 8 oz. of fluid. The right lung was adherent to the parietes at the lower and back part by strong membranous bands. These adhesions, it was, however, evident, were not of recent formation. The lung itself was thickened, and its texture more than usually solid. When cut into, a frothy mucus flowed out. The left side of the chest was apparently healthy. The pericardium was considerably

enlarged, and contained about four ounces of fluid. It was not thicker than natural ; but on the external surface its vascularity was increased, more particularly towards the left side. The heart was fully double its natural size. The external surface of the left ventricle was highly vascular, and towards the base of the heart presented a granulated appearance. This appearance did not extend to the right ventricle. The coronary arteries were larger in proportion to the size of the heart, but in every respect healthy. The right cavities were increased in size, but otherwise their appearance was natural. The great increase of size was in the left ventricle, whose cavity was so much enlarged, as to admit of the hand being turned round in it with facility. The parietes of the left ventricle were thinner than natural, and the muscoli pectinati more projecting.

The tricuspid and mitral valves were perfectly healthy, as were also the semilunar valves of the pulmonary artery. The valves of the aorta presented a shrivelled appearance ; their margins were irregular, thickened, and of a cartilaginous consistence. When stretched to the uttermost, they did not reach within the tenth of an inch of the openings of the coronary artery. The aorta, throughout its entire course, was perfectly healthy, with the exception of a small opaque spot near the heart, which in reality could not be called a morbid appearance.

## ABDOMEN.

The stomach was considerably distended, and externally presented a mottled appearance, which was most remarkable at the great extremity. The mucous membrane was soft, thickened, and covered with a viscid mucus. A few spots like petechiæ were observable at the bulging extremity. The entire of the intestines was distended with flatus. The small intestines were very vascular externally. The liver was apparently healthy, but appeared, in common with the other viscera, to contain more blood than usual. The left kidney was enlarged; its structure friable, breaking down under the finger. The right kidneys healthy; the spleen presented its usual appearance.

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In this case many of the symptoms were so well marked and distinctive, as to enable me, as I thought, to pronounce with certainty upon the nature of the disease. The violence of the heart's action, conjoined with the full, strong, vibrating, and even visible pulsation of the superficial arteries, left no doubt on my mind, nor on that of the gentlemen who had seen the patient along with me, that the proximate cause of the disease was an active enlargement of one or both ventricles of the heart. When the body was opened, therefore, I was not a little surprised to observe a condition of parts the very opposite of that which I had been most confident of finding. Had circumstances prevented the examina-

tion of the body, I should have rested very contented with an opinion, which a little further investigation proved to be erroneous.

The disease of which this patient died was evidently passive aneurism \* of the left ventricle, conjoined with dilatation of the cavities of the heart. The state of the aortic valves seems sufficient to account for the dilatation of the ventricle. From being shrivelled, thickened, and not extending within one-eighth of an inch of the openings of the coronary arteries, they were consequently, when applied to one another, incapable of closing up entirely the ventriculo-aortic aperture. During each diastole of the ventricle, therefore, a quantity of blood flowed back through this aperture from the artery, which meeting with the stream of blood flowing in at the same time from the auricle, occasioned a violent and supernatural effort in the ventricle to empty itself of its contents. This effort frequently repeated seems, in a certain degree, to have overcome the resistance, and occasioned a distention of the fibres of the ventricle, whence the dilatation of its cavity, and thinness of its parietes.

The dilatation of the right cavities of the heart is to be attributed to the obstructed circulation through the lungs, which was occasioned by the regurgitation of the blood from the aorta, preventing the blood of the pulmonary veins from flow-

\* See Corvisart.



ing readily into the left side of the heart. Although the shrivelled and contracted state of the aortic valves prevented them from completely closing the ventriculo-aortic aperture, and they allowed a reflux of blood from the artery into the ventricle, there was no diminution of the aortic aperture itself, and therefore a full stream of blood was thrown into the artery at each stroke of the ventricle; whence arose the full, hard, and vibrating pulse, which, conjoined with the violence of the pulsation in the region of the heart, led me to suspect an active, rather than a passive enlargement of the ventricle. Had there been actual diminution of the aortic aperture, the smallness of the stream of blood, which would have passed from the ventricle into the artery, must have given rise to a small, feeble, and thready pulse, which, inasmuch as diminution of this aperture is the most frequent cause of dilatation of the ventricle, is the kind of pulse most generally met with.

The parietes of the left ventricle, though thinner than natural, were not so much attenuated as to be incapacitated from acting with considerable energy upon the blood. The degree of impulse communicated to the blood was not only evident from the force of the pulsation, but from the high state of capillary vascularity presented by the pericardium, left side of the heart, liver, and intestines. Had the disease continued much longer it is probable the walls of the ventricle would have continued diminishing

in thickness, and the pulsation of the heart must have become proportionably less violent.

The epigastric pulsation seems to have been more owing to the impulse communicated by the heart to the diaphragm, and from thence to the abdominal muscles, than to pulsation of the abdominal aorta.

The frequent attacks of pain in the heart and arm constituted a most remarkable peculiarity in the preceding case. The paroxysms were probably spasmodic, and the exciting cause seems to have been the diseased state of the heart. We know that a diseased condition of the organs, the liver, spleen, stomach, uterus, &c. is a frequent cause of spasmodic or nervous symptoms.

These paroxysms generally came on during sleep. Of the state of the nervous system during sleep we are ignorant, but we know from experience that it has a powerful influence in disposing the body to be affected with nervous disorders. It is a matter of observation that the whole train of nervous disorders, asthma, epilepsy, incubus, &c. are particularly prone to make their attack during sleep.\* I am not aware that in any case of diseased heart, uncom-

\* For these and some of the following observations I am indebted to an excellent paper on Angina Pectoris of my friend Dr. Black of Newry. Vide Black's Clinical and Pathological Reports, p. 29, 30.

bined with ossification of the coronary arteries, paroxysms of such severity, or of such regular periodical recurrence have been observed as in the case which I have just related.

The uneasiness which the patient felt when he lay on his left side seems to have proceeded from the diseased state of the heart. The left cavity of the thorax, in which the heart is chiefly situated, is naturally smaller than the right. When the patient lay on the left side the left cavity would be diminished, partly by the external pressure arising from the weight of the body itself, and partly by the incumbency of the right lung on the mediastinum. Hence arose the uneasiness inducing a change of posture. When the patient turned to the right side, the left was freed from external pressure, and the heart, pericardium, and great vessels had a tendency, by their own weight, to occupy a portion of the right cavity of the thorax, and thus to produce an amplification of the left, whereby their motion was rendered more free and undisturbed. The fluid contained in the right cavity of the thorax, by pressing on the lung when the patient lay on the left side, may have contributed to increase the uneasiness.

The effusion of serum in the right cavity of the thorax, the adhesions between the pleuræ, the solidification of a portion of the lung itself may account, to a certain degree, for the cough under which the patient laboured for a consider-

able time previous to the commencement of his illness.

The asthmatic attacks under which the patient laboured towards the close of the disease, were probably to be attributed to a temporary obstruction to the circulation through the lungs, in consequence of the left side of the heart being unable to empty itself of its contents. The presence of flatus in the stomach might tend, not only to increase the severity of the asthmatic attacks, when present, but contribute much to bring them on. It was remarkable that the paroxysms of pain in the breast and arm were always relieved after the expulsion of wind from the stomach. Of the influence of eructations in mitigating pain of the thorax, produced by mal-organization of the heart and large vessels, particular notice has been taken by Morgagni and Dr. Parry.\*

What was the immediate cause of death in the preceding case, as there was neither rupture of the heart, nor any of its vessels, it is difficult to say. An intense degree of asthma, obstructing altogether the pulmonary circulation, was probably the cause of dissolution. It is hard to say in what the disease originated. The patient could not attribute

\* Vide Morgagni De Sed. et Caus. Ep. xvii. 16, xviii. 17, xxvi. 11. Parry on Angina Pectoris. Morgagni, Ep. of the frequent occurrence of ossification of the aorta and valves of the heart in players on wind instruments. De Sed. et. Caus. Ep. xviii. 24.

it to any particular cause ; but I think it not improbable, that the previous pulmonic disease, combined with the habit he was in of playing on the flute and singing, had contributed to its production.

**A CASE**  
**OF**  
**FATAL HÆMORRHAGE**

**SUCCEEDING TO THE TYING OF THE**

***CAROTID ARTERY,***

**AT THE REMOTE PERIOD OF SIX WEEKS AFTER  
THE SEPARATION OF THE LIGATURE.**

**BY J. W. CUSACK, M. D.**

**ONE OF THE SURGEONS TO DOCTOR STEEVENS' HOSPITAL, AND  
SURGEON TO SAINT PATRICK'S LUNATIC ASYLUM.**

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**ON** the 16th of August, 1820, P. S. aged 36 years, of a consumptive habit, and in other respects unhealthy, in a fit of despondency attempted suicide, by inflicting a deep wound in his throat with a knife. He was immediately conveyed to Steevens' Hospital, and in a few minutes after his admission I saw him. He was then recovering from a faint ; his countenance was pale, his eyes wild, and expressive of impatience at the restraint imposed on him ; his efforts to breathe were laborious and distressing, and his pulse was scarcely perceptible.

The wound extended from the sterno-mastoid muscle of the left side, inclining downwards, and crossing the centre of the thyroid cartilage to the angle of the jaw on the right side. The thyroid cartilage was almost completely cut through. On the left side, the anterior edge of the sterno-mastoid muscle was wounded. On the right the knife had penetrated more deeply beneath the jaw, and divided this muscle to a great extent. The sheaths of the large vessels on each side of the neck were exposed, and the pulsation of the arteries was visible.

As the hemorrhage had wholly ceased when I saw the patient, and as he made an obstinate resistance to any attempt to examine the extent of the injury, I merely connected the lateral parts of the wound by the interrupted suture, and some adhesive plaster. The system soon began to recover itself; the pulse rose, and heat returned to the surface. About half past seven, A. M. hemorrhage recurred, the blood gushed from the right side of the throat, and although one of the pupils, who was standing by the bed-side, promptly applied his finger to the part, the patient fainted before the bleeding could be restrained. I saw him almost immediately after this occurrence, and from the extent of the hemorrhage, I had no doubt that either the right carotid, or one of its larger branches was opened; and as a further loss of blood would in all probability have proved fatal, I determined to secure the trunk of the artery without delay. To avoid enlarging the wound, the

lower margin of the integuments over the vessels was drawn downwards. The sheath being exposed, I made an opening on the laryngeal side, and without any difficulty, applied a single ligature to the artery; and as the thyroid artery of the opposite side was exposed and its coats injured, it was also secured.

The lateral portions of the divided integuments were again approximated, and the central point of the wound was covered with a slip of thin muslin, which was occasionally removed to give passage to the mucus, which was freely discharged, through the opening in the larynx. The unfortunate patient soon became restless and seemed disposed to embrace any opportunity of completing his destruction: He made several attempts to tear open the wound, and was therefore secured in a strait waistcoat. When drink was offered he eagerly attempted to swallow it; a portion, however, of the fluid passing through the wound excited severe paroxysms of coughing.

On the following day, the 17th, he was more composed, and endeavoured to speak; we could only collect, however, that he lamented the criminality of his attempt; he pointed particularly to his head, and gave us to understand that it was affected with severe pain. His respiration was comparatively easy, and he was not distressed with cough, except after taking drink.



It is unnecessary to note the slight variations in his situation from this date until Wednesday the 23d. His mental disease appeared gradually to amend ; on the fourth and fifth days, the power of deglutition was much more impaired than on any of the preceding days, in consequence of some slight inflammatory symptoms, which having subsided, he was soon enabled to swallow a sufficient quantity of liquid, and some bread softened in tea. It was expected that, with the assistance of an elastic gum tube, he might have been relieved from the unpleasant effects produced by his drink passing through the wound ; but the introduction of the tube into the œsophagus occasioned so much distress that he would not submit to a repetition of it.

Thursday, 24th. His condition appeared this day much altered for the worse. During the evening of the 23d his mental disturbance returned, he was sullen, and anxious to conceal himself from the attendants ; a slight hæmorrhage had taken place from the wound on the right side, the quantity of blood lost was, however, inconsiderable ; the wound looked unhealthy ; the arteries of the neck throbbed violently ; pulse 110 ; countenance pale and sunken. When I spoke to him he turned away, and wished to express his desire to die. I directed him to be bled, and to have 10 drops of the tincture of digitalis in barley water every hour until the system became affected.

In the evening of the 25th he appeared more

tranquil, and his pulse less frequent; however, he lost about two ounces of blood from the wound. When the bleeding recurred, I removed all dressing from the wound, and covered it with a slip of muslin only. The dose of the tincture of digitalis was increased to 20 drops. He slept tranquilly during the night, and on the morning, his situation seemed much improved, his pulse was reduced to 90, and his digestive organs were regular.

27th. Had no return of hæmorrhage; was composed and anxious for nutriment. His pulse was reduced to 70. From this day to the 6th of September, when the ligature came away from the carotid, he suffered occasionally from cough, and increased expectoration. The wound presented an healthy granulated surface; his voice was more distinct, and he was able to make himself understood. From this date until the 16th his situation appeared to afford a reasonable hope of his recovery. He slept well, took a sufficient quantity of nutriment, and was solicitous about his wife and family.

Symptoms of a pectoral affection, however, became urgent at this period; he was tormented with constant cough, lost his appetite, had night-sweats, and complained of pain in his right side. For these symptoms he was blistered with much benefit, and as the air of the public ward appeared prejudicial to him, he was removed to a room better suited to his condition; he was directed

to take the decoction of Iceland moss with sulphuric acid.

Before the 1st of October the pectoral symptoms had almost entirely subsided; his cough scarcely troubled him; he swallowed solids without difficulty, although a trifling portion of his drink continued to pass through the opening in the larynx.

So far the case seemed in progress to a favourable termination. By the end of the second week in the month he had improved so much in health that he walked about the hospital, and had determined to remove to the country. The wound had contracted: only a small opening, about three lines in diameter, remained in the thyroid cartilage, the margin of which was surrounded with a line of healthy granulations.

On the morning of the 15th, at the usual visiting hour of the hospital, he complained of having lost his rest the preceding night by a pain in his right ear, extending along the sterno-mastoid muscle. His cheek was flushed; pulse quick; skin hot and dry: on examination a slight fulness of the mastoid muscle was observed, which extended to the seat of the injury. The discharge from the wound, which had almost closed, was increased in quantity, and the granulated margin which surrounded the wound was unhealthy. A cathartic mixture was directed, and a bread and water poultice was applied to the right side of the throat.—17th. During the

last 24 hours he was kept perfectly quiet ; he was not permitted to eat, or make any exertion. He slept during the night, and made no particular complaint, except of the pain of his ear. The discharge from the wound was unhealthy, and of a red colour ; and my attention was particularly attracted by a small point of granulation on the right side of the wound.

At 11 o'clock, one of the resident pupils was called. He found the dressings tinged with blood, but conceiving it a trivial occurrence, he merely applied a dossil of lint to the place from which it appeared to have flowed. At 4 o'clock I was sent for, when it was stated to me, that the blood had suddenly gushed from the wound, and was but partially restrained by pressure. When I saw him it appeared to me but too evident that the carotid was open. By the application of some dried sponge, the hemorrhage was restrained, until Mr. Wilmot and I had time to consult, and we decided upon the expediency of tying the carotid artery nearer to the sternum.

I proceeded to this operation, which I found was rendered difficult by the close adhesions which had consolidated the cellular texture. After exposing the sheath of the vessels about half an inch above the origin of the subclavian artery, I made an opening into it on the inner side, but after passing the ligature and tying the knot, we found our efforts fruitless, as on removing the pressure the hemorrhage recurred with undiminished violence.—A few moments terminated his existence.

## DISSECTION.

After the integuments were removed from the course of the right carotid, the sac of a small abscess was exposed, occupying the situation of the first ligature. Its lateral diameter did not exceed one inch, extending from the opening into the larynx to the right side of the sheath of the vessels. Its extent from above downwards was less. The lower extremity of the carotid was visible, it was distant from the upper about half an inch, both were pervious, and the edges of their orifices were ulcerated and irregular. In prosecuting the dissection, the parts were found closely consolidated. The sheath adhered so closely to the vessels and the cellular texture surrounding it, that no infiltration of blood could have taken place. Having removed the larynx and trachea, with the vessels on each side, the injured carotid was slit open; its coats were found considerably to exceed in thickness those of the artery on the left side.

On examining the wound in the larynx, a dense membrane was found uniting the divided alæ of the thyroid cartilage, leaving an opening in the centre about half an inch in diameter. The edges of this orifice were round and smooth. The mucous membrane in the vicinity of the wound was slightly thickened. In other respects the internal surface of the tube appeared healthy.

The thorax exhibited appearances of having suffered from inflammation, the pleuræ being closely adherent at several points.

**A CASE**  
**OF**  
**TRAUMATIC TETANUS,**  
**SUCCESSFULLY TREATED BY**  
**TOBACCO,**  
**WITH**  
**OBSERVATIONS.**

**BY JAMES O'BEIRNE, M. D.**

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**MUCH** of the capricious and unmanageable character of Tetanus may, with strict justice, be imputed to the want of any philosophical views of either its seat or its causes. Hippocrates rather mentions than describes the disease. Galen conjectures its seat to be in the medulla spinalis;—indeed, seeing that the brain, from the undisturbed state of its functions, could scarcely be considered engaged, nothing appears more natural than his referring it to the spine, the chief source of nervous supply to the muscular system. Fernelius, Willis, Hoffman,

Burserius, Frank, and some others, adopted the same opinion, and by the result of examinations into the state of the vertebral canal, gave it an importance, which, as a mere speculation, it could never have possessed before ;—it has, however, been the fate of this hypothesis to have had little or no influence on the plan of treatment, which in the total absence of a *ratio symptomatum*, may be characterized as having been, at all times, arbitrary, irrational and empirical—until within a few years, as if such an opinion had never been held, inspection of the spine in Tetanic cases, was scarcely either thought of or resorted to ;—a neglect so singular could have alone proceeded from a conviction of the subject being so interwoven with the dark and inscrutable laws of the nervous system, as to shut out all hope, except such as might be expected from the discovery of new and powerful remedies—the observation of some physiological facts, admitting of direct application to, and calculated to throw light on diseases of the same class, must have had some effect in gradually recalling and supporting the ancient doctrine : thus, Walther produced artificial Tetanus by plunging a very slender stiletto into the spinal marrow of a frog, after the head had been severed from the trunk—the same very extraordinary phenomenon was observed to ensue, on pressure being made upon the cerebral extremity of the medulla spinalis of such acephalous fœtusses as, for a short time, occasionally survived their birth ; but it was reserved for the present age and the genius and industry of M. Le Gallois, Dr. Wilson Philip, Messrs.

Brodie and Clift, to produce, by direct experiments on the nervous system, results the most surprising and unexpected ;—the relative powers and influence, as well as mutual dependance of the different branches of this system received, from their labours, a more perfect elucidation than their nature ever seemed to promise. Le Gallois particularly succeeded in establishing the power of the spine to perform its functions independently of the brain, and the phenomena of Tetanus furnish a striking instance of the truth of the fact. Walther's experiment, repeated by him and others, uniformly gave the same results.—Obstacles the most embarrassing and formidable to the investigation of all nervous diseases being now, in a great measure, diminished or removed, and the spirit of enquiry becoming effectually roused, our journals, present us with numerous and accurate reports of the state of the spine in Tetanic Cases. Dr. Saunders of Edinburgh appears to be the earliest, in in these kingdoms, to urge the agency of the spinal marrow in various diseases, particularly in Tetanus, as well as to examine its structural derangements.—His report in the 16th volume of the Edinburgh Medical and Surgical Journal, founded on sixteen years attention to this subject, although concise is, perhaps, the most complete, valuable and interesting of any we possess—as it must, or ought to be familiar to every medical reader, it will be sufficient for every purpose to mention that, without one exception during that period, he states appearance of inflammation to have unequivocally presented itself in either the Tuber



**Annulare, Medulla Oblongata, or Medulla Spinalis**—that, according to the degree or duration of the spasm, the nerves supplying the muscles acted upon were observed to have been more or less inflamed, and, in that state, were traced from their termination to their origin; and, lastly, that, in Trismus, these appearances were confined, in many instances, to the tuber annulare and medulla oblongata, the spinal marrow remaining sound. Other cavities, it is true, were long observed to shew various degrees of inflammation; that they should, ought not to be matter of surprise, when the wide influence of the spinal system is recollected, but very strong grounds indeed exist for attributing such appearances to the remedies employed. My friend Dr. Reid of this city has taken some just and ingenious views of this disease, in *An Essay on the nature and treatment of Tetanus and Hydrophobia*. Dublin, 1817.

Every point considered therefore, it may be asserted, without hazarding much, that the seat of Tetanus is as well established as its nature may ever admit it to be. In placing it, however, in the tuber annulare, medulla oblongata and spinal marrow, it is not meant to deny that the brain itself may also become engaged, for the intellectual faculties and the senses have been observed, in rare instances, to be affected from the commencement; but, being anomalous, such cases can no more be expected to affect the general conclusion, than those of epilepsy mentioned by Musel and others, in which the spinal vessels were observed varicose and

gorged, can induce us to give that disease an exclusive seat in the spine.

In what manner the reputed causes of Tetanus raise the storm within the spinal system, forms, obviously, a question of extreme difficulty, and will never, perhaps, admit of more than an approximation to truth ; hereafter it may be treated with much greater ability than I pretend to, but the importance of the investigation, as well as the plan of this paper, oblige me to attempt its consideration in a brief way.

As no hereditary tendency has been observed in the disease—as its invasion is most fortunately greatly disproportioned to the instances of wounds or exposure to cold,—and, as no peculiarity either of wound or of constitution presages its approach, a point of great practical importance naturally suggests itself,—namely, whether there may not pre-exist certain states or circumstances of the constitution which dispose to the developement of Tetanus on the infliction of a wound, exposure to cold, &c. In this country and on the continent the question has been considered, but not so fully as it deserves ; for, if such states have an actual existence, the success of our treatment must greatly depend on their removal.

On reviewing the numerous causes of this disease, there appears to me to be an evident necessity for separating them into the exciting and the predispos-

ing. Under the first class, wounds, the action of cold, atmospheric influence, and passions of the mind range themselves, while all the others fall naturally under the latter, in which we can alone expect to find materials for our subject. Indeed, without coming either to a hasty or an abrupt conclusion, I should imagine that, as the causes of this class exist previous to the application of the exciting causes or their effect, they may be fairly considered identical with those states or conditions of the body which we are in search of. Venturing to look upon them as such, let us then carefully sum them up, and see what observations or deductions they afford.

Heurteloup mentions a fatal case of Traumatic Tetanus, in which the intestines were found blocked up by a great number of cherry stones. Dazille describes a case of Enteritis, caused by excess in drinking, which terminated with fatal tetanic symptoms. Many cases of cholera are recorded as having ended similarly. Hillary attributes the trismus nacentium to either retained meconium, to a gelatinous matter remaining after it, to hard excrement, or to a cheesy matter produced in the stomach by the action of some acid on the milk. Mr. Abernethy, on inquiring into the state of the bowels, found their contents not like feces. Dr. M'Arthur, in the 7th volume of the Medico Chirurgical Transactions, observed "a peculiarly offensive smelling, yellow matter" pervading the intestines. A state of great constipation has been remarked frequently to have existed before Tetanus has come on. M. Fournier

Pescay, the author of the article "Tetanus," in the *Dictionaire des Sciences Medicales*, in speaking of worms in the intestines as a cause, mentions the work of a M. Laurent, a physician at Strasburg, in which he almost exclusively attributes traumatic cases to the presence of worms in the digestive canal. Without having seen the work, it appears clear, that an assertion, so unqualified and general, cannot be admitted; yet, under severer restrictions, the opinion seems to me to have stronger claims to attention than M. Fournier Pescay is willing to grant, or indeed than is generally thought. Sauvages mentions a fatal case of Tetanus, in which the intestines were pierced by worms. Chaussier relates one, in which the young man was, at once, freed from Tetanus on the expulsion of a large worm. In the *Journal of Loder*, Professor Mursinna gives a case of Trismus cured on the discharge of a solitary worm 10 ells long. In the 6th volume of the *Medico Chirurgical Transactions*, Dr. Phillips describes another in which his patient was suddenly relieved by an enema of Turpentine, which opened the bowels, and brought down a small worm. Dr. Painchaud of Quebec reports, in the 42d volume of the *London Medical and Physical Journal*, a successful case, in which a number of worms were discharged. In the 4th volume of the *Edinburgh Medical and Surgical Journal*, Mr. Arnoldi of Montreal mentions another case of success, in which several worms were discharged just before the attack. Stoll and Larrey found numerous lumbrici in the bowels of tetanic patients who died. In the only three instances of Tetanus in which I

saw the bowels moved in the Péninsular campaigns, ascarides were discharged in one, and a lumbricus in each of the others. These cases are but selected from a crowd of others, to be seen in the records of medicine, and reasoning from additional circumstances leads to the belief, that worms are much more frequently present in this disease, than they are either suspected or discovered. During life such obstinate constipation exists, that they are retained. If it be even overcome one or more worms may pass off, unobserved, in the stools. In our examinations after death, it cannot be denied that, either from disinclination, inattention, or not considering it necessary, the practice to neglect laying open the intestinal canal in its whole tract, is too general. To these reasons let us add, that worms, when numerous, have been observed, in Tetanus, to crowd to one spot, and that the solitary worm can occupy, at a given time, but one part of the canal, and we may then form some idea how much chance must have presided over their discovery, and how very often indeed they must have escaped observation. Finally, considering that worms so frequently induce, and so uniformly aggravate, spasmodic diseases, I cannot but look upon them as being by far the most constant and powerful of the causes of Tetanus; but, whether the disease be more certainly or frequently produced by a particular species, or by a solitary worm rather than a number of them, are points which remain for future observation to establish, and are, perhaps not totally divested of practical utility.

The most remarkable and interesting feature of

the predisposing causes is, that they exclusively reside in the organs subservient to digestion. The observation irresistibly leads us to theorize, and to look upon the Splanchnic System as the medium of communication between these organs and the spine ; from which, by a reflected operation, the original sources of irritation become themselves excited in their turn. In this way might the invariable presence of constipation, and the obstinacy of its nature, be accounted for. It explains the power which these causes exert, as well in exciting, as in keeping up the disease, and demonstrates that, when left to nature, except by one of her rare instances of unexpected interference, the result must ever be fatal. But the mind quickly turns from perhaps idle speculation, to considerations " more german to the matter," and, at once, recalls and admits the full force and truth of what Mr. Abernethy has advanced and established, *viz.* that local irritation may produce disorder in the digestive system ; and that, if the disorder be continued and aggravated, even Tetanus may be caused. The well known opinions and practice of Dr. Hamilton stamp additional importance on the influence of these organs. Indeed to the greater attention attracted towards them by his writings, may be exclusively attributed the comparatively greater success obtained in the present than in any former period.\* To whatever source,

\* Le Cat, Petit, Le Dran, and many eminent French Surgeons, never saw a case of Traumatic Tetanus recover. M. Fournier Pescay asserts that, before his plan had been announced, no instance of cure was known. During my service

however we refer the fact, it is valuable, and should encourage us to prosecute investigation ; for, unfortunately, the number of successful cases is still immeasurably exceeded by that of failure.

If the views taken of the Etiology of this disease be correct and admitted, they necessarily lead to the following indications of cure

1st. To have recourse to the most powerful remedies for overcoming constipation and destroying worms.

2dly. To employ those which shew the most decided empire over the nervous system.

That these are the most solid principles to guide our practice, appears incontrovertible from this circumstance alone, that all medical men begin to enter-

with the Artillery of the Peninsular Army for the whole of the period comprized in the excellent report of Sir James Macgrigor, peculiarly favourable opportunities were afforded me of witnessing Tetanus. Out of about 200 cases I did not see one of recovery. Being left, after the battle of Waterloo, at Brussels in the sole charge of the wounded officers and men of the Artillery and Engineers in that city, and being in constant communication with the medical officers superintending the different hospitals, I cannot recollect an instance of success among the few cases which occurred. To speak with candour, my impression is, that the antispasmodic plan was more depended on than the purgative, and I cannot recollect that the spine was ever examined. In the very few years which have since elapsed, the number of successful traumatic cases, reported in the journals of all countries, certainly more remarkable than at any former period.

tain hopes of their patient's recovery only when they succeed in moving the bowels, and that sleep is induced. Dr. Hamilton, in advocating the preeminence of the purgative plan, certainly appears not only to generalize too much, but to detract from the value of antispasmodics. That he does so unjustly, is best proved by the fact, that, of all modes of treatment, the combination of the purgative and antispasmodic plans has been the most generally successful. In a future part of this communication it will also be attempted to be proved that, in tetanic cases spasm is extended to the intestines, and of course that means to remove it become indispensable. From all that has been said on the influence of worms, it appears worth while to attempt their destruction within the body. When this is effected, there is not only a considerable source of irritation removed, but their expulsion is known to be rendered thereby more easy and certain.

Assuming, therefore, the indications laid down to be just, let us consider the means hitherto employed, and see how they correspond with them.—The local plan of treatment, such as dilating or cauterizing the wound, or amputating a limb, has seldom, if ever, effected a cure singly, possesses few advocates in the present day, and meets none of the indications. In the constitutional plans, remedies have been chiefly selected from the class of antispasmodics. Of these opium has been the most employed and the most successful; but one of its properties, that of producing and confirming the cos-



tive state, raises an insurmountable objection to its use, and fully accounts for the singular manner in which the tetanic patient resists its ordinary effects, which are powerfully opposed by the constant irritation it keeps up in the digestive organs, even when attempted to be counteracted by the most active enemata. To the rest of the class it is quite sufficient to object that, if they do not cause or keep up constipation, they are totally unequal to its removal. The caprice and disadvantages attending every known means have been long and sensibly felt; and Mr. Samuel Cooper, the learned and ingenious compiler of the Surgical Dictionary, observes that, "reflection should lead us not to give up the subject as hopeless, but to redouble our exertions for the discovery of a more successful method of treatment, and, if possible, of some new medicine possessing more specific power over the disorder." Under such circumstances it must appear strange, that Tobacco, which concentrates within itself such various properties, and has shewn such marked influence over diseases of the same class, should not have been frequently and fairly tried. Zacutus Lusitanus and Riverius, mention it as having caused Epilepsy, Hysteria, &c. Sydenham employed it successfully to remove constipation, Ileus, and Paraplegia. Cullen asserts its agency in removing the most obstinate costiveness. Lately its powers are attested by Dr. James Curry in epilepsy, by Dr. Abercrombie in dysuria, and by Mr. Henry Earle in retention of urine. In strangulated Hernia

its efficacy is well known, but with analogy so strongly in its favor, the only instances of its mention or employment in Tetanus which I have been able to meet with, after considerable research, are the following:—the late Mr. Royston, in his excellent Medical History of Tobacco, inserted in the 25th volume of the Medical and Physical Journal, mentions a thin 4to, written in the early part of the 17th century, by Edmund Gardiner, entitled, “The Triall of Tobacco,” in which the author asserts that, “the suffumigation of tobacco being taken, is a good remedy for the starknesse or stiffnesse of the neck, called Tetanus, and for any pains or aches in the body, proceeding of the causes that Tetanus doth.” Magnenus and Neander mention tobacco with confidence, especially the oleum Tabaci applied to the neck and spine, as a remedy for Tetanus. Larrey applied poultices of tobacco leaves to the wounds of many of the soldiers who were affected, in Egypt, with this disease, but without any alleviation of the symptoms. Sir James Macgrigor, in his Report on the Diseases of the Army of the Peninsula, in the 6th volume of the Medico-Chirurgical Transactions, says, “Tobacco glysters, tried in the advanced stage of the disease, seemed to have no effect.” He subsequently, however, considers the tobacco fume worthy of further trial. In the same volume Mr. Henry Earle mentions an instance in which he tried it in the form of enema. Mr. Thomas Duncan of Grenada relates a case cured by tobacco-smoke, in the 11th volume of the Edinburgh

Medical and Surgical Journal. Upon the authority of the same gentleman, it appears that Mr. Harris, surgeon of the Magnificent, after Rodney's victory in April, 1782, recovered a traumatic case by the fumes of Tobacco blown up the nostrils. Mr. Allan, in his System of Surgery, speaking of the means of removing constipation in Tetanus says, "the most valuable injection is the tobacco glyster; it is not only the most powerful remedy with which I am acquainted, for exciting the action of the bowels, and bringing away the hardened feces, but it also has a manifest effect in relaxing the spasms, by the sickness and syncope which follow its operation." This is evidently the language of conjecture, for he does not, as in the instance of opium, &c. mention his own experience; and he concludes by adopting, as his mode of treatment, opium in large doses, combined with cathartics. Indeed, he proposes the tobacco glyster but as an adjuvant to the latter. But that tobacco should be neglected in the treatment of Tetanus is not, perhaps, to be much wondered at. With the exception of strangulated hernia, its use has become almost forgotten in the practice of medicine; for it has ever been the fate of this remedy to have had extravagant friends, and prejudiced enemies, and to have been employed, without consideration of its very great activity, in quantities disproportionate to the age, constitution, or strength of the patient, or the peculiar circumstances of the case. In no one instance can the saying of Valesius be more fitly applied than in this—"Nihil est quod

“*prosit, quin aliqua ratione noceat.*” Looking upon it, however, as possessing within itself, in a very singular and eminent degree, the properties of a Narcotic, a Purgative, and an Anthelmintic, and considering that its action is, fortunately, most energetic when applied to the Rectum, I cannot divest myself of the strong impression that, of all remedies, tobacco, judiciously managed, is that which holds forth the most rational hope of enabling us to subdue this dreadful malady. More extended experience, however, can alone stamp value on the opinion or the remedy. The very limited trials made of it furnish some useful observations; but as they must come more forcibly after the relation of a case recovered by tobacco, I shall defer them to another place.

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### CASE.

J. Flood, aged 13, a remarkably healthy and strong boy, residing at the North Lots in this city, having, on the 16th of last August, ventured too near some machinery, had both his feet miserably torn. He was immediately conveyed to the Charitable Infirmary, and had not been exposed either to cold or wet, as the day was uncommonly fine. Being summoned to his assistance, I found the dorsum and

toes of the left foot extensively lacerated and contused, while a regular and thick flap of the sole was raised from the inner to the outer side of the foot. The tendons running along the dorsum and sole were laid bare. The sole of the right foot, and the integuments near the outer ankle were also lacerated, but not in an equal degree. Emollient poultices were directed to be applied to the feet, an ounce of sulphate of soda was ordered to free his bowels, and he was placed upon the low diet of the hospital. The next morning the appearance of the wounds was not improved much. The bowels had been slightly moved. This plan being continued for a week, the wounds shewed a sloughing tendency, and he was observed to be slightly delirious.

August 24th.—Some wandering; both feet sloughing extensively; tendons and phalanges of the left foot have come off with the poultice; observed to be very restless, to toss about much, yawn, and stretch his neck during the day.

℞. *Pulveris Antemonialis grana tria.*

*Opii puri granum.*

*Conservæ Rosæ q. s. ut f. Pilula, 3tiis horis repetenda.*

25th. Complains of stiffness of the neck, and pain in turning the head; bowels constipated.

℞. *Calomelanos grana quinque.*

*Pulveris Jalapæ grana duodecem.*

*Syrupi Simpl. q. s. ut fiat Bolus Statim Sumendus.*

26th. Rigidity of the muscles of the back of the neck quite perceptible ; bowels still confined.

*Repetatur Bolus 2dis horis ad tertiam Vicem, donec alvus bene responderit.*

27th. Complete trismus, the lower jaw being firmly drawn upwards and backwards against the upper ; risus strongly marked ; slight opisthotonos ; bowels obstinately bound ; much perspiration about the head and face ; remarkable moroseness.

*℞. Decocti Anthemidis Nobilis Uncias Sex, Olei Terebinthinæ Unciam cum Semisse, Sulphatis Sodæ Unciam.*

*Vitelli ovi q. S. ut ft. Enema statim injiciendum.*

28th. Muscles of the trunk affected ; those of the extremities perfectly free from rigidity or spasm ; pain running from the sternum to the spine not present, but seems unprofitably exchanged for violent pain along the course of the spine ; upper teeth project so much beyond the lower as to admit broth to be introduced ; swallowed it with great difficulty ; speech so thick and inarticulate as to be quite unintelligible ; paroxysms recur every 10 minutes with violence. Enema of yesterday returned as given, and produced no evacuation ; no difficulty experienced in inserting the pipe of the injecting syringe into the rectum.

*Repetatur Enema 4tis horis, nisi prius Supervenerit Catharis.*

29th. Symptoms as yesterday, but complains of great pain about the larynx.

*Applicentur hirudines decem utrique lateri Gulæ et Emplastrum Vesicans Nuchæ ; Repetatur Enema 4tis horis.*

30th. No change in the symptoms this morning, but a recurrence of paroxysm every 3 or 4 minutes with strong opisthotonos. *Injicietur Enema Terebinthinæ statim.*

*R. Tinct. Opii.*

———— *Hyosciami, Singul. Gutt. xv.*

*Aquæ Menth. Pip. ʒss. M. ft. haustus 3tiis horis repetendus.*

3 o'clock, P. M. Met my friend Mr. Wilmot in consultation ; found that the injection had been returned, as usual, almost as soon as given, and without freeing the bowels ; but one draught had been given ; the paroxysms are now much more frequent and violent, and his state is altogether worse than it has yet been. Under these circumstances we decided upon giving a trial to Tobacco. The following enema was according prescribed, and directions given to repeat it at 12 o'clock at night, should no impression be made on either the frequency or violence of the paroxysms.

*R. Foliorum Nicotianæ Tabaci Scrupulum.*

*Aquæ Bullientis uncias octo.*

*Macera per dimidium horæ et ft. Enema primum injiciendum.*

31st. Had two injections last night ; when about to administer them it was observed, at each time, that the anus was constricted in the most remarkable manner ; every attempt to introduce the pipe of the syringe brought on a paroxysm ; but, by perseverance, it was passed up the rectum. When there, it was found that the greatest force could not discharge the contents of the syringe, until the paroxysm had passed over ; it was then effected with ease. Each enema was retained about two minutes, and caused nausea, vomiting, copious perspiration about the head and chest, tendency to delirium, and sense of great heat through the intestinal canal ; the last effect could only be learned, of course, when his speech became somewhat intelligible. The general symptoms appear rather worse than improved this morning.

*Injicietur Enema Nicotianæ Statim et Alterum Vesperi.*

September 1st. Had two injections yesterday ; the same difficulty in their exhibition ; caused the same effects, but the first, after being retained about three minutes, moved the bowels and brought down some black, indurated feces, and a dead lumbricus about one foot in length. On inquiry it was found that about two years before he had passed a similar one, but alive. The second enema only brought off a very small quantity of feces of the same description.

*Injicietur Enema Nicotianæ Tabaci quartis horis.*



6 o'clock P. M. Spasms less frequent ; neck less rigid ; generally better ; has had two injections which were retained rather longer ; urine of a deep red colour, and smells strongly of tobacco.

*Injecietur Enema Nicotianæ pro re nata.*

2nd. Continues better ; deglutition more easy ; urine as before.

*Repetantur Enemata ut heri.*

3d. Has had three injections yesterday. State as yesterday.

4th. Deglutition still better : took some bread in crumbs and some milk ; spasms less frequent : extremities as throughout unaffected ; the great toe of the left foot completely gone, as also the second, third, and fourth ;—fifth safe. Wound pale and bedewed with sanies ; the toes of the right foot safe ; deep ulceration of the sole ; both feet directed to be simply dressed, and a poultice to be placed over the dressings.

*Repetatur Enema sextis horis.*

5th. Two injections given yesterday ; both retained for nearly a quarter of an hour ; brought down each time much dark coloured, hardened feces ; the last caused much vomiting ; had few paroxysms, scarcely any perspiration, and slept well during the

night ; took this morning some bread moistened with milk ; the muscles of the jaw less rigid ; those of the back and abdomen very much so ; finds great relief in keeping the head forward.

*Continuentur Enemata ut heri.*

6th. Had two injections yesterday ; the first retained a very short time, the last for a quarter of an hour, and came away with a considerable quantity of natural feces ; had very few and slight paroxysms yesterday ; abdominal muscles greatly relaxed for a short time last night ; had very little sleep, and no perspiration ; started violently and frequently during this morning ; the under-jaw is now so separated from the upper as to enable the tongue to be protruded some distance ; it appears furred and white ; the spasms indefinite as to their recurrence, seizing him every five, ten, or twenty minutes ; even an hour elapses between their attacks.

*Injicietur Enema Nicotianæ Tabaci statim.*

7th. Bowels freely opened yesterday ; dejections natural ; complains of feeling in a blaze when the injection is given ; paroxysms mild yesterday, and with an hour of interval. Last night slept well, and the abdomen felt quite soft and relaxed ; muscles of the neck less rigid this morning than yesterday ; wounds pale and discharging sanies ; takes mashed potatoes, milk and tea with ease, and eats fast and plentifully ; urine as before.

*Injicietur Enema Nicotianæ vesperi.*

8th. Has had no paroxysm since the injection yesterday evening ; slept well last night, and the muscles of the abdomen quite soft. Pulse, which had been all through about 90, raised this morning to 120 ; urine as yesterday ; permitted to please his palate as to diet.

*Injicietur Enema Nicotianæ Vesperi.*

9th. Very few paroxysms yestersday ; risus less marked ; slept well, and the muscles of the neck and abdomen quite relaxed last night ; ate a sheep's trotter, some saffron cake and mashed potatoes yesterday. The general state improved this morning, and the mouth can be opened much wider. Pulse small, and reduced to 80.

*Injicietur Enema Tabaci Vesperi.*

10th. Retained the enema half an hour last night ; followed by vomiting, purging, perspiration, debility, inclination to sleep, and relaxation of abdominal muscles ; this morning is generally better ; urine as before.

*Intermittatur Enema Nicotianæ Tabaci.*

11th. Slept almost the whole of last night ; is better this morning.

1 o'clock, P. M. Got an evident change for the worse ; paroxysms again became frequent and long, and the abdomen and back rigid ; risus more marked ; countenance peculiarly anxious ; lips

livid ; slight Dyspnœa. Circumstances prevented his being seen before 5 o'clock ; was then in the same state ; at 6 o'clock an enema of tobacco administered and retained for half an hour ; the paroxysm ceased soon after to recur ; the abdomen and neck became less rigid ; a copious and natural discharge took place from the bowels, and, in an hour after receiving the enema, he returned to his former favourable state. During the height of the paroxysms, it is remarkable that he was forewarned of each attack by a pain running from the left foot to the trunk.

*Injicietur Enema Nicotianæ post horas sex.*

12. Has had no motion except that which followed the enema last night. This morning he discharges much saliva and has had a few spasms, each being preceded by the pain from the left foot to the trunk. Appetite good ; eats broiled meat, chopped potatoes. &c. urine in considerable quantity, still dark coloured, and smelling of tobacco.

*Injicietur Enema Nicotianæ Vesperi.*

13. Had very few paroxysms in the course of yesterday, but they became rather more frequent, yet slight, towards evening. After the enema last night had neither pain or spasm for two hours ; it caused a most copious discharge from the bowels in ten minutes after its exhibition, and soon after the back and abdomen relaxed surprizingly ; after having his feet dressed, felt quite comfortable ; slept

well during the night. The countenance has, this morning, lost much of the risus or Tetanic expression of distress which had been so strongly marked for some days before ; feels relief and an agreeable sensation when the muscles of the back are rubbed ; discharges much saliva. Pulse 96 and small. His usual diet directed.

*Injicietur Enema Nicotianæ Vesperi.*

14th. Quite easy and free from spasm yesterday until four o'clock in the afternoon ; about that hour a fly got down his throat ; all his efforts could not get rid of it for a quarter of an hour, during which time he was in constant spasms, which subsided on its removal. Towards evening the muscles of the back and abdomen became more rigid, and a pain, in the hypogastric region was felt, with desire to go to stool, but no motion. Very restless during last night. This morning it was discovered that, through some mistake, the enema had not been given last night. The countenance now assumes a peculiar cast, as if he were about to sneeze, but could not ; pulse during a paroxysm 136 ; when free from it 96. Ulcers healthy and discharging pus.

*Injicietur Enema Nicotianæ ut heri.*

15th. A few spasms yesterday before the enema, which caused neither nausea, perspiration or depression. Indeed for the last four days it caused little disturbance ; no motion or paroxysm since its exhibition ; muscles of abdomen and back relaxed, and

sound sleep during the night. Pulse this morning 72, small and wiry ; urine as before.

*Repetatur Enema Nicotianæ ut heri.*

16th. Had very few spasms from the morning visit to two o'clock yesterday afternoon ; at that hour had an enema, which was retained five minutes ; caused nausea, much depression, and brought down a great quantity of consistent and natural feces. During the night had a number of motions, but slept soundly when not disturbed by their passing. This morning the abdomen and back are more relaxed than yesterday, and the mouth can be more widely opened. Pulse 96 and rather wiry.

*Injicietur Enema Nicotianæ ut heri.*

17th. Much purging last night ; dejections whiter than natural, and much wind passed with each motion ; has had very few spasms this morning, but such as occurred were announced by the pain from the left foot to the trunk. The muscles of the jaw, back and abdomen much relaxed ; pulse 96, and and softer than yesterday ; eats and drinks freely of his favourite articles, mashed potatoes, milk, tea, broiled beef, mutton, &c.

*Intermittatur Enema Nicotianæ.*

18th. Paroxysms few and slight last night ; loss of appetite, head-ache and much purging last night ; considerable diarrhœa this morning ; abdomen and throat relaxed ; much thirst, no perspiration ; coun-

tenance placid, except when speaking, or under a paroxysm. Diet directed as usual.

19th. Ate little yesterday ; slept well last night ; this morning the purging still continues ; countenance placid ; muscles of the neck, jaw and abdomen greatly relaxed : turns the head from side to side without pain.

20th. Appetite somewhat better ; had a good night ; purging less, but consistent and of a natural colour ; muscles relaxed as yesterday.

21st. Discharges much saliva. Pulse 88, and small ; other symptoms as yesterday ; wound healthy and cicatrizing fast.

22d. As yesterday.

23d. Slept better last night than since his attack. Pulse 96 this morning ; no paroxysm ; appetite improved ; ate some fish ; articulation much more distinct ; still purged ; ulcers healthy.

24th. Diarrhœa continues ; improved in every respect.

25th. Slept well ; has had no paroxysm ; appetite good ; opens the mouth wider to-day than since it become closed.

26th. As yesterday. Scarcely any risus ; pulse small, and 100.

27th. As yesterday.

28th. Improved in all respects ; purging less ; stools more consistent ; can sit on a bed-pan ; has taken a liking for cold bacon and mashed potatoes. Ordered. Right foot nearly well, granulations being healthy, and on a level with the surrounding surface ; the left foot healing fast.

29th. As yesterday.

30th. Improved generally ; purging less ; risus conspicuous during ill humour ; countenance otherwise placid.

October 1st. Gains strength and appetite ; pulse stronger and fuller.

2d and 3d. Purging less ; sleeps soundly at night, and scarcely ever awakes during the day, unless when roused.

8th. Has since progressively improved ; strength greater ; bowels natural ; no vestige of risus ; sits up in bed ; right foot nearly as well as ever ; left healing fast.



Nov. 1st. To this date the wounds alone were attended to, and dressed in an emollient, simple way, but allowed to please himself as to diet ; the wounds are now healed ; the right foot well ; the left contracted. Discharged cured.

December 6th. Paid him a visit and found him in rude health, but he has not as yet ventured to walk.

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The history of this case, given so much in detail, affords matter abundantly interesting and important. Like most Traumatic cases, its formation appears not to have been rapid, the first marked symptoms having shewn themselves on the 25th, and the disease being only fully established on the 30th. What has been considered by Chalmers, and in fact generally, as the pathagnomonic symptom of the disease, pain darting from the scrobiculus cordis to the spine, is seen to have been absent, but its place supplied by pain equally intense along the vertebral column. This deviation from the general course may be accounted one of nature's anomalies, but is not a novel occurrence to me, having, in the Peninsular campaigns, witnessed three similar instances, all of which proved fatal. I find also that Doctor Briggs of Liverpool reports in the 5th volume of the Edinburgh Medical and Surgical Journal, an acute case of Traumatic Tetanus which ended for-

unately, and in which this symptom was also wanting;—he seems to consider it as belonging only to the advanced stage, and doubts even whether it might not be brought on by the opium used, as he has known, that, where opium has been employed in gastrodynia, an acute spasmodic pain shooting from the sternum to the spine, has been produced by it, and could only be relieved by purgatives. The extremities not being engaged may be reckoned a favourable feature, but was certainly more than counterbalanced by the great frequency, duration and severity of the paroxysms. Again, an active purgative treatment is seen to have totally failed, the injections being quickly returned without producing the slightest effect. We are next struck with the facility of administering an enema in the early stage, and the great difficulties subsequently experienced when the disease had arrived at its height. The remarkable circumstances, described as attending their exhibition, give the strongest possible confirmation to the supposition of Cullen, who says, “it is highly probable that, in this disease, “the intestines are affected with the spasm that “prevails so much in the other parts of the system.\*” Proceeding, we remark an anodyne given on the 30th, and, on the same day, the dis-

## B B 2

\* My friend Mr. Kirby informs me that, in the examination of Tetanic cases, he has frequently observed the intestines contracted, at those points which happened to be empty, almost to the obliteration of the canal, and in such a manner as to insulate portions of their contents in various parts of their tract.

case to arrive unchecked at its greatest height and severity. Under such disadvantages the agency of tobacco is then called in, and is observed to produce effects surpassing any to be expected from the most energetic or daring employment of opium, hyocyanus, digitalis, mercury, venæsection, or any of the usual means, either singly or combined. It prostrates at once the nervous energy, although excited to the highest pitch,—unlocks, at its third exhibition, the bowels before so obstinately bound—destroys a large lumbricus and expels it;—under its operation all symptoms amend;—discontinued, either by design or accident, the symptoms become aggravated, and recur with force;—reverting to its use, an instantaneous amelioration takes place;—persevered in, so as to keep the constitution constantly under its influence, and to cause diarrhœa to such extent as to affect the appetite, hitherto good, and then only discontinued, tobacco is seen, unassisted by other means, to conduct the case to a prosperous issue. So strong a body of facts has never before perhaps been brought forward in evidence of the powers of any remedy;—but like other powerful agents, it may, by being injudiciously managed, deceive expectation, and fall into disrepute:—it behoves us then to recollect, that its action is not only uncertain and unequal on different persons, but on the same individual at different periods, and under different circumstances. One of the greatest errors, therefore, committed in its therapeutical application is certainly the want of caution in not feeling our way with small, before we employ large doses of a remedy possessed of

such singular activity. In the case just related it will be noticed that, even considering the youth of the subject of it, the dose has been small and apparently ill proportioned to the disease to be contended with, but it will also be observed, that, by being repeated according to the urgency of symptoms, every possible advantage has been gained without incurring inconvenience, much less danger. It must be obvious, that the age, the strength, the habits and the constitution of the patient, as well as the period of the disease should alone direct its dose. Thus, in a young, strong, healthy person, accustomed to the use of tobacco, and labouring under the first stage of Tetanus, a dose might be ventured on, which could not be safely employed in the case of a person advanced in years, weak, unaccustomed to tobacco, and in an advanced period of the disease, with cold perspirations, weak, fluttering and intermitting pulse. Were, however, in a case where so much must be left to the discretion and judgment of the practitioner, the extent to be mentioned to which it should be used in treating an adult labouring under this malady, many reasons would strongly dispose me to confine it to half a drachm in each enema, the form which the closure of the teeth, the difficulty of deglutition, and the greater activity of tobacco applied to the large intestines, obviously render the most convenient and effectual—in such a proportion, repeated so as to keep the system under its uninterrupted operation, and thus slowly break the force and frequency of the spasms.

I cannot but feel strongly impressed with the belief that this remedy will hereafter be found to be singly equal to the cure of a great proportion of cases of Tetanus. Its great power and simplicity, contrasted with the uncertain, unscientific, and often conflicting nature of the agents hitherto employed, in my mind, give to tobacco the most obvious and decided superiority. In drawing so strong a conclusion from a solitary instance of success, I am perfectly sensible that I appear to forget my own extensive experience, as well as that of ages, as to the obstinate and fatal character of this malady. My defence must solely rest on the very unique and imposing features of the case, as well as on the numerous reasonings and analogies they give rise to. If they do not justify, they will probable excuse my temerity.

It next becomes necessary to examine whether this remedy has ever before been fairly tried in this disease. In the "Trial of Tobacco" we see it used successfully in the form of "Suffumigation" and Magnenus in his work "de Tobaco" thus describes the process: "Paretur vasculum instar alembici "parvuli quod clausum sit undiquaque, nisi quod "ad latus habebit foramen cui canula aptabitur, ita "ut nihil omnino vaporum nisi per hanc canulam "effletur; reponatur hujuscemodi vasculum in igne "moderato et sinantur primi vapores ut pote im- "puriiores et aquasiores abire, subinde alios va- "pores meliores exsuget per hanc canulam sive tu- "bulum aeger." Mr. Harris, as already mentioned,

successfully used it by fumigating the nostrils ; but its exhibition either by fumigation, friction with its oil, poultices of its leaves, or any other form, must give way to the more certain and powerful mode of administering it by enema. Curiosity, however, on the severity of a case, might certainly suggest their trial as auxiliaries.

Mr. Earle, in his case, used the tobacco smoke, having previously had twenty ounces of blood drawn ; it produced temporary alleviation of spasm ; but he says, “ the exhibition of the enema caused so much “ agitation that it was not persevered in.” In any future case he proposes to use an extract of *Nicotiana* made into a suppository, and placed up the rectum, as having the advantages of being more easily removed if too powerful, or longer retained if beneficial, and as producing little or no irritation. Upon all these points a few short observations seem called for. In his valuable and original application of tobacco to the relief of retention of urine, he used an infusion of one drachm in eight ounces of water. In his case of Tetanus, he administered it in the form of smoke, but does not mention the dose. The motives for this change are not given, but it does not seem to be one for the better, as smoke appears to act upon too great a surface, and, of course, is less mild and determinate in its operation. Besides, the infusion, by diluting and breaking down the remarkable consistency of the excrementitious matter must greatly favour its expulsion. The dose I take to be the same as that used in retention of

urine, and, for the reasons already given, I consider it to be too large. All the indications with which blood-letting may be employed in Tetanus are seen to be fully answered by tobacco, and therefore the previous depression which it produces can only have the effect of rendering even a small dose of the latter violent and unsafe. Indeed, it may be remarked generally of venesection in this disease that, if it be used to subdue inflammation of the spine, it should be most profuse, and after all not be successful, as the inflammation in this case may probably be looked upon as an effect of nervous excitement, not the essence of the disease, and consequently that it will be best combated by allaying or removing the cause. In the case just related, the result of patient perseverance in the exhibition of injections furnishes an instructive lesson, and such as induce me to suppose that, had they not been left off in Mr. Earle's case, the favourable effects obtained from the slight opportunity given the remedy, might have possibly been improved to ultimate success. The suppository of the extract, by acting on too small a surface, and not assisting the solution of fecal matter, may be reckoned an experiment in which precious time might be lost, and one unequal to fully answer the proposed end.

Sir James Macgrigor briefly reports the employment and failure of this remedy in the advanced stage of Tetanus in the Peninsula; yet, as he afterwards considers it worthy of further trial, the circumstances attending its use must have been

more or less favourable ; besides, it must be admitted that, considering the state of great exhaustion which prevails in the advanced stage of this disease, no period less favourable to the success of a very powerful agent could possibly have been selected.—Such reports of the effects of tobacco as reached me in the Peninsula, through the constant communication subsisting between the medical officers of the army are now imperfectly recollected, but they were certainly rather favourable than otherwise, and my friend Mr. Guthrie has just informed me that he has seen it do much good.

The traumatic case given by Mr. Duncan of Grenada is highly worth referring to. Wine, opium, oil frictions and the warm bath were freely employed before the tobacco fume was resorted to ; he says : “ the enema produced fainting, which lasted some time. On recovering his senses, he expressed himself well, and unconscious of being sick ; had a large, hard and fetid stool soon after.” And again, “ the spasms did not recur for half an hour after the syncope,” although, before the use of tobacco, they recurred every few minutes. An injection of tobacco fume, in conjunction with opium, wine, oil frictions, and the warm bath, was administered daily until the disappearance of all symptoms. A perusal of the case can scarcely fail to give a very high idea of the powers of tobacco in Tetanus, as well as incline us to consider the agents employed with it to have retarded rather than assisted its sanative influence.



Upon the whole, I feel no hesitation in pronouncing the case I have related to be the only one, in which tobacco, by having the treatment of the disease committed to its sole agency, has been fully and fairly tried in Tetanus.\*

\* Such other remarks on this disease, as my opportunities have enabled me to make, are confined to the following, viz. I never saw a case attended with fever or emprosthotonos, or one arising from a wound of the head. Wounds of the hand or foot did not appear to be more frequently followed by Tetanus than those of other parts, and, on a rough calculation, we generally considered it to attack in the proportion of one in 200 wounded.

AN ACCOUNT OF

# TWO CASES

IN WHICH

## BRONCHOTOMY WAS PERFORMED.

BY RICHARD BURGESS, M. D.

LICENTIATE OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

(COMMUNICATED TO THE EDITORS BY MR. KIRBY.)

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**T**HERE are few accidents more alarming, or the consequences of which are more uniformly fatal, than the scalding of the mouth and throat, which takes place during an attempt to swallow hot liquids.

This accident most frequently occurs to children who are tempted to drink from the pipe of a kettle containing boiling water. Having seen five such instances within these few years, I should suppose they are by no means uncommon. The following cases were treated by myself, and an account of them is now

published with a view of encouraging early Bronchotomy under similar circumstances : the experience I have had leaves no doubt upon my mind, that death is produced in almost every fatal case by obstructed respiration, and very rarely by the ordinary local effects, which an injury of the kind is likely to give rise to.

### CASE I.

Anne Holmes, aged three years, drank boiling water from the pipe of a tea kettle, by which the mouth, tongue and fauces were severely scalded. Great swelling of the parts immediately ensued, which not only prevented deglutition, but impeded respiration very considerably. In about two hours after the accident I saw her. On looking into the mouth, it appeared as if a large piece of raw flesh had been forced into the fauces, and had completely filled up the passage. Respiration was performed with very great difficulty, and was momentarily becoming more laborious,—in fact the child soon appeared to be dying ; I therefore recommended that Bronchotomy should be resorted to without delay, as affording the only chance of relief, and to this the parents of the child consented.

The operation was performed with some difficulty, in consequence of the fatness of the patient ; however, the second ring of the trachea was divided, and on the air rushing in the child immediately revived, sat up in her mother's lap, and pointed anxiously to some drink, with which she was indulged, but she was unable to swallow. There was no hemorrhage from the incision ; the orifice, however, soon became obstructed with viscid mucus, which required to be regularly removed, as all the alarming appearances of suffocation returned. I introduced a tube into the trachea, but the irritation it produced was so great as to render its retention there impracticable. I accordingly gave directions to the attendants to keep the opening in the wind-pipe covered with a bit of fine gauze, and to clear it of mucus whenever respiration was impeded. The usual treatment for inflammation was pursued, and the child's strength subsequently supported with nutritious enemata. About the eighth day I was enabled to introduce a little whey into the stomach by means of an elastic tube passed through the nares, but respiration was still difficult. On the 10th day I applied my finger to the opening into the trachea, and found that the child could breathe through the natural passages. On the 12th day she could swallow fluids, and at the end of three weeks the deglutition of solids could be performed, the wound was healed, and natural respiration completely restored.

## CASE II.

In November, 1818, I was called to a child, aged 18 months, who had met with an accident similar to the foregoing. I saw her about eight hours after she had taken a scalding fluid ; she appeared lifeless ; I opened the windpipe, and the child instantly revived. She died, however, in about twelve hours after the operation, evidently in consequence of her attendants neglecting to keep the wound free, by regularly removing the mucus which collected within it.

*Clonmel,*

*December 1, 1821.*

**A CASE**  
**OF**  
***STRANGULATED HERNIA,***  
**OCCASIONED BY A**  
**DOUBLE STRICTURE IN A SAC,**  
**OF AN HOURGLASS SHAPE.**

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**BY**  
**RICHARD CARMICHAEL, M. R. I. A.**  
**SURGEON OF THE RICHMOND HOSPITAL, &c.**

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**ON** the night of the 6th of December, 1821, a middle aged man, of robust make, was admitted into the Richmond Surgical Hospital, labouring under the symptoms of Strangulated Hernia. He stated that these symptoms had commenced on the preceding evening, at which time he first found himself unable to reduce the Hernia, which was a scrotal one, of the left side.

Every attempt to reduce the protruded parts by the taxis was found unavailing ; but as the symptoms were not of a very pressing nature, his pulse being soft and moderate, and no signs of peritoneal inflammation being indicated by pressure on the abdomen, the operation was deferred, and a trial given to blood-letting, purgative pills, the warm bath, and tobacco injections.

On the following morning, as these means had not produced any beneficial results, and the taxis had again failed, I proceeded, with the assistance of my colleague Mr. Todd, to perform the operation. With the view of returning, if possible, the protruded parts without exposing them, I first made an incision about three inches in length on the neck of the sac, from which I removed all external stricture, but could not succeed in this way to return the Hernia. I then continued the incision downwards to the lower part of the tumour, and opened the sac, which exposed a fold of intestine of a livid colour, but not mortified, and a large volume of omentum, some of which adhered firmly to the lower part of the sac. The stricture, which was formed by the neck of the sac, gave way to the pressure of the finger, or was rather torn through by the nail, and the intestine was in consequence reduced with much ease. Some greater difficulty was experienced in my endeavours to return the omentum, the greater part of which was, however, reduced, but it was thought most prudent to leave that portion in situ which adhered to the sac, as it was evidently con-

nected to it by old adhesions, and therefore could not have been reduced by the patient, although he stated that he was always enabled to return the entire of the Hernia, and retain it by a truss.

The patient was now carried to bed, and an enema was ordered every second hour, until the bowels should become affected. No motion was however procured. In the afternoon he became exceedingly restless, and in every respect worse. The abdomen was covered with leeches, and thirty-four ounces of blood were taken from his arm at two separate bleedings. The state of his stomach precluded the hope of any opening medicine being retained, but the purgative enemata were continued. On the morning of the 8th he died, about 24 hours after the operation.

On examination—The contents of the abdomen were found free from inflammation ; but neither the strangulated intestine nor omentum could be discovered. It was evident that they had not been returned into the cavity, although when operating I had pushed them as far upwards as my finger could reach into what I conceived was the cavity of the abdomen. Further dissection explained these perplexing and extraordinary circumstances. It was found that between the internal and external rings, the sac had expanded itself into a large cyst, which extended into the basin of the pelvis on the one side, and into the hollow of the ileum on the other, lying between the muscles, being covered anteriorly by the



external oblique, and separated from the cavity of the abdomen, by the peritonem, the fascia transversalis, the transverse, and internal oblique muscles. In this cyst the inflamed intestines and the omentum were discovered, and found to be completely strangulated by the internal ring. I do not recollect any systematic writer on Hernia who has noticed this hour-glass sac and double stricture; but having been ascertained in one instance, no doubt it has often occurred, and occasioned the failure of the operation, and as a fact of some practical importance deserves to be made generally known.

Even had I been aware of this unlooked-for formation of the sac, I could not have removed the stricture of the internal ring in the usual way, as it lay far beyond the reach of the finger from the external ring; I should therefore have been obliged either to cut down directly upon the former, or else have continued the incision from the one to the other. The protruded parts thus being in this case subjected to two strictures, there can be little doubt but that of the internal ring was the primary one, and the greater of the two, and that the strangulation was probably caused by the descent of an additional portion of intestine or omentum; while that caused by the external ring was probably but secondary, and produced by the swollen state of the intestine from the stricture above.

The peculiar formation I have above detailed

appears to me to have arisen from a careless or injudicious use of the truss, which is in general applied by the patient so near to the os pubis as to be only capable of closing the external ring, while the Herniary tumour is allowed to remain between the two rings ; a space which, as we have seen in the case before us, may, in consequence, be gradually extended from the increasing size of the Herniary mass, while it is prevented from passing downwards by the application of the truss at the external ring. This case therefore affords a practical lesson to the patient, as well as to the surgeon ; for if the peculiar construction of the Herniary sac above described was owing, as I suppose, to the improper application of the truss, patients may learn to be more attentive in placing the pad exactly over the site of the internal ring—the situation of which, surgeons ought to be particularly careful in pointing out to their patients ; and it will lead surgeons to ascertain, by every means in their power, when operating, whether they have completely succeeded in returning the protruded parts into the cavity of the abdomen.

In the case before us the intestine disappeared with so much facility after the stricture at the external ring was removed, that no doubt was entertained in this respect ; but the volume of omentum was reduced with some difficulty, and that portion which adhered to the sac, as already mentioned, was not returned. From the experience this case affords, I should be extremely

unwilling, in any other instance, to leave any portion of omentum unreduced ; as its presence at the ring must prevent, in a great degree, the surgeon from ascertaining, with sufficient accuracy, if any farther stricture remains undivided.—Again, if the symptoms of strangulation should continue obstinate after the operation, the surgeon, from the experience derived from this case, may well be warranted in examining into the state of the internal ring.

**CASE**

**OF**

**DISLOCATION OF THE HIP JOINT,**

**WITH THE MANNER OF ITS REDUCTION, AND**  
**THE APPEARANCES ON DISSECTION.**

**BY JAMES SCOTT, M. D.**

**MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND, AND  
SURGEON TO THE COUNTY INFIRMARY AND GOAL OF ARMAGH.**

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**DISLOCATIONS** being rarely in themselves mortal, opportunities do not often occur of ascertaining by anatomical investigation the extent of injury sustained in these accidents, consequently there are but few cases recorded of the appearances on dissection in luxations of the hip joint. The following having been accompanied by a laceration of the intestines, which caused the patient's death, afforded an opportunity of examining the joint in forty-eight hours after its displacement, and forty hours after reduction had been accomplished.

Patrick Quin, a labourer, æt. 34, was brought to the Armagh Infirmary on the 29th of September, 1820. A bank had fallen in upon him six hours before, whilst at work in a gravel pit. I found him in bed complaining of his right thigh. There was a contusion and very slight laceration above the knee; the thigh was shortened and deformed, and lay very awkwardly upon the other, presenting much the appearance of a fracture that had been distorted by mismanagement in transporting the patient. The muscles were flaccid, the knee and toes turned inwards. I had been informed there was a fracture, and the appearances *prima facie* led me to expect one, but on grasping the limb to make extension, it was found firmly fixed: every attempt at rotation outwardly caused extreme pain in the groin, at the hip, and in the course of the sciatic nerve: when, however, with difficulty and much suffering to the patient a certain degree of rotation was effected, the trochanter described a segment of a large circle. I directed the man to be lifted out of bed and placed erect; the limb retained the posture above described; it was nearly two inches shorter than the other; the knee rested above its fellow; the toes were turned inwards and lay above the opposite instep. On viewing the hip, the trochanter was manifestly higher on the injured side than the other. The hollow naturally found behind that process had disappeared. The buttock was shorter and rounder, but flaccid; the head of the bone could not be felt through the glutei muscles. No effort of the patient could extend the limb, but he

had the power of bending it a little towards the abdomen, by making the opposite leg a fulcrum for the inverted toes to creep upwards upon. The existence of dislocation having been ascertained, reduction was attempted in the following manner : The man being laid *supine* on a table covered with blankets, a folded sheet was passed between the thighs for the purpose of counter-extension ; a long towel was then fastened above the knee, the leg carefully semiflexed, and in this posture the force of six men applied for a quarter of an hour. No change was effected on the position of the parts. A grain of tartar emetic was then administered. I was about to apply the pulleys, but first determined on trying Mr. Hey's plan of fixing the pelvis, by placing the patient astride on a bed-post, and to combine with this the French mode of making extension from the ancle. The latter seemed well adapted to the present case, as the pressure of the towel upon the contusion above the knee had caused considerable pain. The towel was accordingly shifted to the ankle, and the man placed astride against the bed-post : a folded blanket guarded the pudendum ; the shoulders were raised and supported, so as to bring the patient nearly to the sitting posture, and in this way he was subjected to extension, gradually increased, made by four men. I placed myself on the outside of the patient, one hand resting on the trochanter, the other carried round the inside of the thigh to give the necessary rotation. After some minutes extension the trochanter was felt to move ; the assistants were directed to favour

my efforts at rotation, and presently the limb acquired its natural straightness and length.

There had been no snap or jerk, yet on discontinuing the extension the bone was found accurately replaced; the hollow behind the trochanter had reappeared, the limb was of equal length with its fellow, and could be easily bent or extended at the will of the patient. In a short time after the poor man was put to bed, it was ascertained that the abdomen had likewise been seriously injured by the accident; it became tumid and painful to the touch, especially about the umbilicus and hypogastrium; and notwithstanding the most active treatment was adopted, he died in thirty-six hours after the accident.

On dissecting down to the hip joint, an extensive extravasation of blood presented itself in the cutaneous cellular substance, covering the trochanter major, and also beneath the fascia lata of the thigh, extending several inches above and below the trochanter. The gluteus magnus being raised from its origin, a considerable extravasation was found in the loose cellular tissue under the gluteus medius: a cavity capable of containing a pullet's egg was also brought into view. This cavity was situated directly where the great ischiatic nerve passes under the pyriform muscle; it contained fluid blood; its boundaries were the pyriformis above, the sciatic nerve before, (supposing the body upright) the trochanter major, and insertion of the gluteus

medius external and posterior, the gluteus maximus posterior. Here the displaced head of the femur had been lodged. The fleshy substance of the gemini and quadratus muscles was found torn across. The pyriformus and obturator internus were perfect. The extravasated blood followed the course of the sciatic nerve deep into the thigh. There was also extravasation between the gluteus medius and minimus muscles.

The internal and upper part of the capsular ligament of the joint was ruptured; the external portion remained unbroken. On turning the head of the bone out of its socket, the ligamentum teres was found to have been torn from its insertion into the dimple of the head of the thigh bone. The brim of the acetabulum at its upper part was fractured to the extent of about an inch; the fractured portion lay loose and nearly unconnected. A fracture traversed the acetabulum in the direction of the junction of the ileum and ischium.

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A case very similar to the above is related by Sir Astley Cooper in his (and Mr. Traver's) essays; but there is no further detail of the dissection than "upon inspecting his body the jejunum was found ruptured; and, upon examination of the hip joint, a portion of the edge of the acetabulum was broken off." It is probable that in a great proportion of cases of dislo-



cation of the thigh upwards, a fracture of the brim of the acetabulum accompanies the displacement, and this may serve to explain the tediousness with which some patients recover the perfect use of the joint after its reduction. It will also suggest the practical necessity of enjoining strict rest in such cases, not only with a view to reunion of the broken bone, but to permit the repair of muscular injury, and allow time for the absorption of extravasated fluids.

The *partial* laceration of the capsular ligament in the above case, would seem to favour the opinion, that a narrow rent in the capsule of a joint may, in some instances, prove an impediment to reduction.

It is worthy of observation, that the ligamentum teres was not ruptured, but extracted by the roots from its insertion in the head of the femur.

*Armagh Infirmary,*  
*October, 1821.*

**AN ACCOUNT**  
**OF A**  
***DISSECTION OF THE HIP JOINT,***  
**AFTER RECENT LUXATION.**  
**WITH**  
**OBSERVATIONS**  
**ON THE**  
***DISLOCATION OF THE FEMUR ;***  
**UPWARDS AND BACKWARDS.**  
**BY CHARLES H. TODD,**  
**ONE OF THE SENIOR SURGEONS TO THE RICHMOND SURGICAL HOSPITAL,**  
**&c. &c.**

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**IN** the summer of 1818, a robust young man in attempting to escape from his bed-room window, in the second floor of a lofty house, fell into a flagged area ; by which accident his cranium was fractured, and his left thigh dislocated, upwards and backwards.

The dislocation was reduced without difficulty, however, an extensive extravasation of blood having taken place on the brain, the patient lingered in a

comatose state for about twenty-four hours, and then died. On the day after, the dissection was performed, and the following appearances were observed in the injured joint and the parts contiguous to it.

On raising the gluteus maximus, a large cavity filled with coagulated blood was found between that muscle and the posterior part of the gluteus medius. This was the situation which had been occupied by the dislocated extremity of the femur. The gluteus medius and minimus were uninjured. The pyriformis, gemini, obturatores and quadratus were completely torn across. Some fibres of the pectinalis were also torn. The iliacus, psoas and adductors were uninjured. The orbicular ligament was entire at the superior and anterior part only, and it was irregularly lacerated throughout the remainder of its extent. The interarticular ligament was torn out of the depression on the head of the femur, as in Doctor Scott's case, its attachment to the acetabulum remaining perfect. The bones had not sustained any injury.

The appearances presented in this dissection not coinciding with the descriptions I had read, and the ideas I had formed, of the anatomy of dislocation of the femur upwards and backwards ; I was induced to devote some attention to the subject, and to adopt those opinions which will be briefly stated in the sequel.

The elementary work on luxations, most generally read and referred to, in this country, is Dr. Farrell's translation of Boyer's lectures, arranged by Richeraud: the following is the description therein given, of the manner in which the luxation of the femur, at present under consideration, is produced.

“ When by a fall from a place, more or less elevated on the soles of the feet, or on the knees, the thigh is pushed forwards and inwards, the head of the femur forced towards the superior and external part of the acetabulum, breaks the internal and orbicular ligaments, escapes through the laceration in the latter, and ascends on the external face of the os ilium; but as the part of the os ilium immediately above and at the external side of the cavity is very convex, the head of the femur soon abandons its first position, and slides backwards and upwards into the external fossa of the os ilium, following the inclination of the plane towards the fossa, and obeying the action of the glutæi muscles, which draws it in this direction. The head of the femur, in ascending thus on the external face of the os ilium, pushes upwards the glutæus minimus, which forms a sort of cap for it, and the glutæus maximus and medius are relaxed by the approximation of the points into which they are inserted. The pyriformis is nearly in its natural state, the gemini, obturatores and quadratus femoris are a little elongated. The psoas magnus and iliacus internus

are relaxed, as are also the other muscles inserted into the trochanter minor."—*Lectures of Boyer, p. 156.*

Although the foregoing may be an accurate description of some cases of dislocation of the femur upwards and backwards, yet I am inclined to believe, that it does not apply to the most common instances of that injury.

To admit of the head of the femur being "forced towards the superior and external part of the acetabulum," and of its ascending "on the external face of the os ilium," it will be obvious to those who carefully examine the mechanism of the articulation, that the thigh must be extended on the trunk, and the dislocating force applied externally and inferiorly, so as to produce what may be termed an excess of adduction. To the limb assuming such positions, which appear to me to be quite essential towards the production of this dislocation in the manner described by Boyer, some considerable obstacles exist.

In the first place, I believe it seldom happens that a person who falls from a height will reach the ground with the thigh extended on the trunk; in the descent the superior power of the flexor muscles will predominate, and at the moment of the application of force to the limb, it will be more or

less in a bent position. It is scarcely necessary to observe, that this circumstance must materially influence the direction in which the head of the bone will be protruded from the articulating cavity.

Secondly, should the thigh and leg be completely extended at the time that the force is applied, it is probable that the other limb will be extended also, and will thus prevent a movement of the stricken limb inwards, beyond a certain point; or, in other words, the opposite limb will prevent that extent of adduction inferiorly, which is necessary to remove the head of the femur from the acetabulum, and to admit of its being forced upon the anterior convex surface of the dorsum ilii. But whether the opposite limb be extended or not, it must oppose a certain limit to adduction, if that term can be applied with propriety, to a lateral movement of the lower extremity, by which it is carried beyond the middle line of the body.

The description given by Boyer, of the head of the femur *abandoning the convex surface of the ilium, and sliding upwards and backwards into the fossa*, would almost lead to the conclusion, that this distinguished surgeon had written it from an hasty view of the skeleton only, and without any reference to the state of the soft parts surrounding the joint, particularly to the alleged laceration of the gluteus minimus, by which the dislocated femur must be embarrassed, and its consecutive change of

position towards the fossa of the ilium much obstructed.

I by no means agree with this author, that in changing its position from the convex to the concave portion of the dorsum ilii, the head of the femur "obeys the action of the glutæi muscles, which draws it in this direction." In the extended position of the thigh, the gluteus maximus is a rotator outwards; did its action materially affect the position of the head of the femur, in dislocation thus produced, it would most probably direct it forwards, that is, towards the anterior spinous process of the ilium, by drawing the trochanter major backwards. The gluteus medius is an abductor, and from the radiated direction of its fibres, and the attachment of its tendon to the entire margin of the great trochanter, it is fully as likely, in the extended state of the limb, to direct the head of the bone forwards as backwards. As the gluteous minimus is said to be lacerated and *pushed upwards*, it is sufficiently obvious that, under such circumstances, it can exert no action whatever on the dislocated femur.

From the foregoing considerations I am led to conclude, that the dislocation of the femur, upwards and backwards, must in almost every instance, be a primary luxation. It appears to me, that the head of the bone may be easily dislocated at once in the oblique direction, by the application of force

to the inferior and external part of the limb, the thigh being at the time in a state of demiflexion, or nearly so; the head of the femur is thus pushed through the posterior and upper part of the orbicular ligament, passes under the posterior edge of the gluteus minimus, separating it from the pyriformis, and forms a cavity for itself under the gluteus maximus, as appeared in the dissection related, or between the gluteus medius and minimus.\*

The condition of the small muscles which surround the articulation, must be determined by the degree of extension to which they have been subjected; in some instances they are lacerated, in others they are not materially injured. When any of these muscles are torn, the injury must occur at the moment the head of the bone is clearing the brim of the acetabulum, for it is at this period that they sustain the highest degree of extension.

Should these muscles escape laceration they will exist in a greater or lesser state of tension, according to the height to which the femur has ascended

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\* If the thigh be bent so as to form a right angle with the trunk, at the time of the injury, the head of the femur will be dislocated into the sciatic notch. The situation on the dorsum of the ilium, which the head of the bone is found to occupy in luxations upwards and backwards, is immediately above the notch.



on the ilium, and to the degree of flexion which the thigh preserves.\*

Of all these muscles, the obturator externus is probably the most extended in this dislocation. The increase of bulk and apparent strength, which may be observed in this muscle and its tendon, in dissections of old disunited fractures of the neck of the thigh bone, is remarkable. In these cases, and particularly when no osseous or ligamentary deposition has taken place about the fracture, the obturator externus resists the ascent of the femur upon the ilium, and by its augmented power materially contributes, after a certain period, to enable the limb to support its share of the weight of the body. A similar effect may reasonably be expected to be produced by the action of this muscle, in unreduced dislocations of the thigh upwards and backwards.

Boyer, Richerand, Sir Astley Cooper and others state, that in this form of dislocation the iliacus internus and psoas magnus are relaxed. To perceive the inaccuracy of this assertion we have only to recollect, that the lesser trochanter of the femur, into which these muscles are inserted, is removed to the upper and back part of the pelvis, and that this eminence is directed considerably more backwards than

\* Perhaps the pyramidalis is an exception. I am disposed to believe that this muscle is either slightly relaxed, or according to Boyer, that it is nearly in its natural state.

previously to the dislocation, by the rotation of the thigh inwards; consequently the portions of the psoas and iliacus which extend between the pelvis and the lesser trochanter, and which in the natural state of the parts are connected with the anterior surface of the joint, are very much curved backwards, and elongated.

It is to the tension of the psoas and iliacus, and of the pectinalis also, that we are in a great degree to attribute in this luxation, the permanently bent position of the thigh and trunk, the severe pain and stiffness in the groin when extension is attempted, and the firmness with which the femur is applied to the ilium rendering rotation almost entirely impracticable.\* It is the strong contraction of these muscles

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\* The femur is not, in every instance, so firmly pressed against the side of the pelvis as entirely to prohibit rotation. In the case, the dissection of which I have related, the limb could be moved extensively; this was ascribed at the time to the paralytic state of the muscles consequent on the compression of the brain. However, Mr. Cusack informs me, that in the case of an athletic young man, who was lately treated by him in Steevens' Hospital for a luxation of the thigh upwards and backwards, the degree of motion of which the limb was capable was very considerable. This could not have been owing to unusual laceration of the muscles, as I saw the patient on the sixth day after reduction, and he was then able, as he lay in bed, to perform all the movements of the limb without assistance. Of this fact the young surgeon ought to be aware, otherwise a dislocated femur with much motion might be mistaken for a fracture of that bone.

also, which constitutes one of the principal obstacles to reduction, by drawing the upper extremity of the femur against the side of the pelvis, for all the other great muscles between the trunk and lower extremity, are relaxed.\*

Boyer observes that it is difficult to assign the cause of the limb being turned inwards in this luxation, conceiving, that if its direction was determined by the state of the muscles, the foot ought to be everted, the obturatores, gemini and quadratus being elongated; he conjectures however, that this "phenomenon" may depend on the thick portion of the capsular ligament, which comes from the anterior inferior spinous process of the ilium, remaining unbroken, and drawing the great trochanter forwards. When this state of the capsule exists, there can be no doubt that it must have the effect of preventing the trochanter from being pulled backwards; but this will not account for the uniformity of the in-

\* It is with much diffidence I presume to dissent from one of the first surgical authorities in Great Britain, but many points in the following passage are irreconcilable with the result of my observations:—

"In the dislocation upwards, the pyriformis and the glutei muscles are shortened, as are also the triceps and pectineus, the psoas magnus and iliacus internus, the rectus, the semitendinosus and semimembranosus, and one head of the biceps. The obturator externus is shortened, but the obturator internus, gemini and quadratus are put upon the stretch. The muscles which, more than others, resist the reduction, are the glutei and triceps."—Sir A. Cooper on Dislocations, in Surgical Essays, part 1. p. 30.

version of the limb, as it can scarcely be supposed that the integrity of the same portion of the orbicular ligament will be preserved in all cases of this dislocation.

Sir Astley Cooper attributes this direction of the limb to the circumstance of the injury being inflicted when the knee and foot are actually turned inwards; however it appears to me that muscular action is also in favour of the limb assuming this position.

If it be admitted that the thigh is generally in a state of demiflexion, when the force causing this dislocation is applied, it must also be admitted that in this state the pyriformis, obturatores and gemini have but little effect as rotators, the power of these muscles as such, being greater or less, according as the junction of their fibres with the femur approaches or deviates from a right angle; and that the power of the anterior portion of the gluteus medius and of the tensor fasciæ latæ, as rotators inwards, is increased in this position, the angle which their fibres form with the thigh bone being augmented; thus the last mentioned muscles will appear to possess much influence in determining the inverted position of the limb, as they must draw forwards the trochanter major and external side of the thigh, at the moment in which the head of the bone escapes from the acetabulum.

The inclination of the thigh forwards and inwards, which constitutes so remarkable a feature of this

dislocation, may be attributed partly to the tension of the psoas magnus, the iliacus internus and the pectinalis, and also to the peculiar form of the surface of the pelvis, to which the upper part of the femur is applied ; but certainly not, as Mr. Samuel Cooper has asserted, to the tense state of the triceps and gracilis, for these muscles are relaxed.\*

\* Cooper's First Lines, Vol. 2. p. 479.

**ON DISEASES**

**OF THE**

**LACHRYMAL GLAND,**

**BY CHARLES H. TODD,**

**ONE OF THE SENIOR SURGEONS TO THE RICHMOND SURGICAL HOSPITAL**  
**&c. &c.**

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**THE** lachrymal gland is not so often the seat of disease as might be inferred from a consideration of its structure and functions, and from a knowledge of the inexplicable influence exerted over the latter by various sensations of the body, and emotions of the mind.\*

\* “ Les maladies de la glande lacrymale sont peu connues. Cela tient sans doute à sa situation profonde qui empêche de les reconnoître, et à l’abri qui lui offre l’orbite contre l’action directe des corps étrangers. Nous ne connoissons aucun exemple d’inflammation de la glande lacrymale ; nous n’en avons trouvé dans les livres aucun de sa dégénération squirreuse. Nous savons seulement qu’il fut présenté à l’Académie Royale de Chi-

This high degree of susceptibility to functional excitement, from causes, many of which are obscure, is in a great degree peculiar to this gland, and varies considerably according to age, sex and temperament. It has therefore been considered extraordinary that an organ possessing a structure apparently as delicate as any other gland of the same class, connected by direct nervous communication with some of the senses, and endowed with extensive sympathies, should be less liable to morbid affections than organs of a similar composition, but comparatively insulated in respect to their sensitive connexions, and their subserviency to mental stimuli.

Although I cannot deny the accuracy of the foregoing observation, yet having met with many instances of diseases of this gland, I am induced to believe, that they take place more frequently than has been suspected; I shall therefore beg leave to submit, in the following pages, the result of my experience on this subject.

### ACUTE INFLAMMATION.\*

The lachrymal gland is subject to acute inflammation, an affection frequently idiopathic, but in the

rurgie une observation de gonflement squirreux de cette glande, laquelle avoit été extirpée avec succès." *Traite des maladies chirurgicales, par Boyer.* T. v. p. 288.

\* For an excellent account of inflammation of the lachrymal gland, I beg leave to refer my readers to Weller's Manual

greater number of those cases which have fallen under my observation, it succeeded to inflammation of the conjunctiva, or some other form of ophthalmia. I have known inflammation of the lachrymal gland to accompany the psorophthalmia of children, when that disease was severe, or aggravated by neglect, exposure to cold, or by the incautious use of stimulating or astringent applications; at the same time it is probable, that in some cases, inflammation of this gland ushers in the ordinary forms of ophthalmia, and gives rise to symptoms generally attributed to inflammation of the eye alone.

We are often informed by patients labouring under ophthalmia, that the first symptoms of their complaint were, pain in the forehead and temple; a profuse watering of the eye, and a sense of fullness in the superior palpebra; and that these were soon followed by intolerance of light, and inflammation of the globe. In other instances, the severe pain in the orbit, increased secretion of tears, and morbid sensibility of the eye, are stated to have continued for several days, without much inflammation of the superficial membranes, thus imparting to the disease some of the characters of deep seated ophthalmia.

The symptoms of acute inflammation of the lachrymal gland are, intense pain in the orbit, but

of the Diseases of the Human Eye, lately translated from the German by Doctor Monteath, one of the Senior Surgeons to the Glasgow Royal Infirmary.



particularly under the temporal extremity of the eye-brow, extending to the temple and cheek, backwards into the orbit, and even into the cranium; defective or profuse lachrymation; when the latter, which is most generally the case, the patient complains of the tears being hot and acrid, and in a few days the edges of the eyelids and the cheeks become excoriated to some extent; both palpebræ, but particularly the superior, are swollen, red and tense; inflammation extends to the conjunctiva and other membranes of the eye, and thus a severe and obstinate form of ophthalmia is produced. More commonly, however, inflammation originates in the conjunctiva, and is thence propagated to the gland.

When the inflammation of this gland is at its height, there are much symptomatic fever and restlessness; flushing of the face, particularly at the affected side; acute pains darting through the orbit and head; and, as it is stated, more or less delirium,\* with strabismus, impaired vision, and protrusion of the globe proportionate to the size of the swelling.

The remedies to be chiefly relied upon in the treatment of this affection are, general blood-letting, the application of leeches to the contiguous surfaces, or the abstraction of blood by cupping the

\* Dr. Monteath's translation of *A Manual of the Diseases of the Human Eye*, by C. Weller, p. 147.

forehead and temple ; warm fomentations, mercurial and saline purgatives, and antimonials. Should inflammation extend to the contents of the cranium, which will be indicated by severe headach and delirium, we must have recourse to the means which are advantageously employed in phrenitis arising from any other cause.

### CHRONIC INFLAMMATION.

Chronic inflammation of the lachrymal gland is a disease almost entirely confined to the early periods of life, and is in all probability dependent on a scrophulous predisposition. In this affection there is an obvious enlargement of the gland, with an occasional œdematous tumefaction of the upper eyelid. The patient seldom complains of pain, but generally of an inconvenient sensation of fullness above the globe, and an inability to move the eye of that side as freely as the other ; this produces strabismus, and double or indistinct vision. When the tumor is large, which is seldom the case, the eye will be protruded.

Patients who labour under chronic inflammation of the lachrymal gland are very liable to attacks of the strumous or pustular ophthalmia ; and I had lately under my care a case, in which that form of ulcer of the cornea, which Mr. Travers has called the chronic interstitial ulcer, was apparently dependent on

chronic inflammation of this gland, or on a morbid state of its secretion.\*

In this disease the best effects are obtained from the application of a few leeches to the neighbourhood of the gland, at as early a period as possible; from a succession of small blisters to the forehead, temple, and behind the ear; from small doses of calomel, blue pill, or some other mild preparation of mercury, with the occasional use of saline laxatives; and from such medicines as an imperfect performance of the digestive functions may indicate. Local applications, except where the conjunctiva or eye lids are inflamed, or the cornea ulcerated, are unnecessary; and even in such cases the benefit derived from them will be small and of short duration, unless our exertions to restore the gland to an healthy state be effectual.

Beside the chronic inflammation of the lachrymal gland, the specific nature of which is probably equivocal, this organ is subject to an enlargement more decidedly scrophulous;† this is characterized by the

\* In the ophthalmia scrofulosa the tears are so acrid, that they excoriate the parts with which they come in contact, and frequently induce an œdematous swelling of the parts surrounding the eye.—*Weller's Manual*, p. 267.

† “ La glande lacrymale est quelquefois, par vice scrophuleux, plus grosse qu’une noisette, et alors elle fait une saillie en soulevant la paupière supérieure.” *Cours d’Anatomie Médicale*, par Portal. Tom. iv. p. 401.

Schmidt says, that particularly young people, from seven to

slowness of its progress, although it sometimes acquires considerable magnitude; by the absence of pain; by the tumor presenting a surface more or less lobulated; and by the constitution and age of the patient. In some instances this affection, after a certain period, will continue stationary for many months, or even for years, while in others it will undergo that form of suppurative inflammation peculiar to scrophulous glands, and will thus prove a tedious and troublesome disease.

More than two years ago I was consulted in the case of a young lady, aged thirteen years, and of a scrophulous habit, who had a tumor between the globe of the right eye and the temporal extremity of the supercilium; it projected at that time a little beyond the margin of the orbit, was not painful, but feeling or pressing it produced an immediate and copious discharge of tears. Exposure to cold was almost uniformly followed by an attack of the pustular inflammation of the conjunctiva, which sometimes lasted with great severity for eight or ten days. The remedies above enumerated, together with country air and sea bathing during the summer seasons, have nearly removed all vestiges of the tumor, and the attacks of ophthalmia have become much less frequent and considerably milder than

nineteen years of age, sound in other respects, but who had a previous appearance of scrophulous dyscrasia, may be attacked with inflammation of the lachrymal gland.—*Weller's Manual*, p. 147.

formerly. It is remarkable that in this case the left eye, the lachrymal gland of which was healthy, was never affected with ophthalmia.

A robust boy, aged four years, with fair hair and florid complexion, was brought to Dublin in the month of June, 1819, labouring under strumous ophthalmia, affecting both eyes in a very severe and highly irritable form. In the course of a few days this attack was subdued by local bloodletting, with tepid fomentations, by small doses of rhubarb and calomel, and by occasionally introducing a drop of a solution of the nitrate of silver between the eye-lids.\* It was observed, however, that the upper lids continued swollen, and that the patient could not elevate them so as to expose the entire of the cornea lucida when he looked straight forward. On the application of pressure with the finger to the region

\* The great degree of morbid sensibility of the eyes in this form of ophthalmia, so disproportionate to the apparent inflammation, has been particularly noticed by Mr. Travers, and is attributed by him to a morbid sympathy of the retina with the secreting surfaces of the primæ viæ and the skin.

Children affected with this disease experience temporary relief from lying on their faces, with the backs of their hands firmly pressed against their closed eyes; from which position they are very reluctant to move. When the palpebræ are forcibly separated, the hot and acrid tears collected under the lids, are ejected by a spasmodic contraction of the orbicularis, and very frequently the patient is instantly seized with a violent paroxysm of sneezing, which continues for some minutes, and recurs when the eye is again exposed to light or even to air. A reference to the distribution of the first branch of the fifth pair of nerves will explain these phenomena.

of the lachrymal gland, the child complained of soreness, and the eyes became immediately suffused with tears.

This case was treated with a succession of small blisters behind the ears, and to the forehead. Three grains of the hydrargyrum cum creta were exhibited every night, and a dose of a bitter aperient mixture every morning for about a fortnight. Sea-bathing was then resorted to, and was persevered in regularly for three months. Under this plan the swellings subsided, the attacks of ophthalmia became gradually less frequent and less severe; and during the last year have not recurred more than once, and then the inflammation was produced by exposure for three or four hours to a sharp wind, in an open carriage.

### ABSCESS.

Abscesses of the lachrymal gland frequently succeed to acute inflammation. In such cases suppuration proceeds rapidly, accompanied with much pain and tension; and as pus collects, the tumor becomes prominent, the eye-lid assumes a red and shining appearance, and a fluctuation is evident.\*

\* Mr. Travers states that the lachrymal gland often suppurates in children, and occasions an excessive swelling above the upper lid, depressing the tarsus upon the globe, so as completely to conceal it.

*Synopsis of the Diseases of the Eye, p. 228.*

The slight degree of resistance which the contents of the orbit oppose, to the extension of an abscess of the lachrymal gland backwards into that cavity ; the contiguity of the matter to the orbital process of the frontal bone, and the extreme delicacy and important connexions of that portion of bone ; are considerations sufficiently conclusive in favour of an early opening being made into those abscesses to discharge their contents.\*

We are advised to give exit to the matter contained in an abscess of the lachrymal gland, by making a puncture, or small incision with a narrow curved bistoury under the superior palpebra into the cyst.† It is presumed that this method is recommended chiefly with a view of preventing the deformity which an external opening might occasion. It will be found, however, that the operation is not uniformly practicable or efficacious. When an abscess of the lachrymal gland is large, the superior eye-lid is rendered so tense, and its tarsal margin is so closely applied to the surface of the protruded eye, that it cannot be raised sufficiently to admit of a lancet or bistoury being introduced under it with safety. The laxity of that portion of the conjunctiva, which is intended to be punctured, is also an objection to this operation ; for after the contents of the abscess have been partially discharged, the relative position of the opening in

\* Callisen. *Systema Chirurgiæ Hodiernæ*, pars prior. p. 351.

† Travers on Diseases of the Eye, p. 228.

the conjunctiva and in the cyst may be altered, so as to obstruct or prevent its complete evacuation; and if pressure be used under such circumstances, the matter will probably be forced into the loose cellular tissue of the fold of the conjunctiva; even should a free exit for matter be obtained in this direction, considerable irritation or inflammation may result from the draining of the contents of the abscess over the anterior surface of the eye.

There are few surgeons who have not frequently laid open abscesses of the eye-lids by external puncture or incision, and yet deformity seldom succeeds.\* Indeed I have remarked that, when any considerable cicatrix remains after this operation, it may in general be traced to delay in opening the abscess, until the integuments become diseased, or are on the eve of sloughing. It is scarcely necessary to state, that in opening an abscess of the lachrymal gland externally, the incision ought to be made parallel to the superior margin of the orbit; thus but few if any fibres of the orbicularis palpebrarum will be divided, and the cicatrix which may remain, being in the direction of the natural folds of the eye-lid, will be concealed by them.†

In cases of abscess of the lachrymal gland, in

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\* Abscesses of the eye-lids very frequently succeed erysipelas of the scalp and face.

† St. Yves, *Traite des Maladies des Yeux*, p. 140, and Guerin, *Traite sur les Maladies des Yeux*, p. 49.



which an opening was too long deferred, or has occurred spontaneously, the orifice is liable to degenerate into a fistula, from which a thin matter is discharged, or a clear fluid, apparently the secretion of the gland, is constantly distilled. This is to be treated by destroying the callous edges of the sore with the nitrate of silver, or some other active escharotic.\*

When abscesses succeed to a chronic inflammation of the lachrymal gland, they are slow in their progress, and almost uniformly possess a scrophulous character. As a general rule those abscesses ought to be interfered with as little as possible; but should they acquire such magnitude as to endanger the soundness or impede the functions of the adjacent parts; or should the skin of the eyelid become tense and thin, and assume a livid colour, I believe it will be found most prudent to give exit to their contents by a small puncture; certainly the sore which succeeds will be slow in healing, but not more so than if the abscess was allowed to break, and the remaining cicatrix will be less conspicuous.

### SCIRRHUS.

The most formidable disease of which the lachry-

\* The German oculists recommend a red hot needle to be carefully introduced to the bottom of the callous opening, and turned round in it several times.

*Welker's Manual, p. 157.*

mal gland is susceptible is, its scirrhus or carcinomatous affection. This disease has been generally looked upon as a mere concomitant of cancer of the eye, and accordingly few authors have treated of it as a primary affection.\* Warner, however states, that he has seen the lachrymal gland so much enlarged and altered from its natural texture, as at length to require extirpation.† That a scirrhus state of the gland may exist, as a distinct disease, is an important fact, which the following case will tend to confirm.‡

Jane Worthington, æt. 70. admitted into the Richmond Surgical Hospital on the 26th of August, 1821. The lachrymal gland forms a large irregular tumour, which occupies the upper part of the orbit, and projects more than half an inch beyond the superciliary ridge. It is covered by the superior palpebra which is stretched upon it, thus rendering the knotty eminences on its surface very con-

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\* "On ne l'observe pas a la glande lachrymale, a moins que par suite des progres de celui de l'œil." *Memoire sur le cancer. Œuvres Chirurgicales de Desault, Tom. III.*

† Warner on the Human Eye.

‡ The globe of the eye, and other contents of the orbit, may be extensively diseased, and the lachrymal gland remain perfectly healthy. In two instances in which I extirpated the contents of the orbit for a fungoid disease of the eye, this gland was sound; and this was also the case in two dissections which I made of carcinoma of the eye, although in one of them the bones were destroyed in many parts, and the disease had extended into the cavities of the cranium and nose.

spicuous. The tumour is extremely hard, and moveable to a slight extent in a transverse direction only. Some, who have carefully examined it, are of opinion that it adheres to the roof of the orbit.

The globe of the eye is not enlarged, but it has been protruded by the tumour, and is so low upon the cheek that the cornea lucida is nearly on a line with the edge of the ala nasi. The inferior eye-lid is everted, and appears dragged down with the globe; its conjunctiva is much thickened, particularly in the line of its fold; there is chemosis and considerable turgescence of the superficial blood-vessels of the eye.

The transparency of the cornea is but slightly obscured, and although vision is destroyed by the pressure of the tumour, and the extension of the optic nerve, yet there is no apparent disease of the interior of the eye. The pains are severe and lancinating, and extend from the tumour to the globe, accompanied with a sense of heat, and a frequent discharge of scalding tears.

The sufferings of the patient are most severe at night, and she is almost entirely deprived of sleep; notwithstanding which, her general health is not much impaired, and her appetite for food is good.

The disease is attributed, by the patient, to a blow

which she received on the eye about seven years ago ; since which period she has been subject to frequent discharges of tears from that eye, but suffered no other inconvenience until a year ago, when the tumour began to project under the temporal extremity of the eye-brow. At first she had no pain or headach ; but as the tumour increased these symptoms set in, and they are now so severe, that she is anxious to undergo any operation which holds out a prospect of relief.

August 29th. In consultation this day with Mr. Carmichael, it was determined that an attempt should be made to extirpate the diseased gland alone, and in the event of that being found impracticable, either from extent of attachments or of deep seated disease, the expediency of removing all the contents of the orbit was fully acceded to ; the intense sufferings of the patient, the probable nature of the disease, and the useless state of the eye, appearing to render this an indispensable alternative.

30th. I performed the operation this day in the following manner :

The patient having been placed on her back on a table, with her head a little elevated, and secured by my assistants, a transverse incision was made through the integuments, nearly parallel to the superior margin of the orbit, from one extremity of the tumor to the other ; and having cut through the

orbicularis palpebrarum and the ligamentum tarsi, I exposed, by a careful dissection, the entire of the anterior surface of the tumor. The diseased gland was then found firmly wedged into the orbit, and it was not without difficulty that the handle of the scalpel was introduced between it and the superciliary ridge, to detach the former from the orbitary process of the frontal bone. The surface of the gland next the eye was irregularly lobulated, and the lobes had insinuated themselves amongst the muscles and other contents of the orbit, so as to render their disentanglement extremely difficult and hazardous ; however, by cautiously tearing their cellular attachments with the end of my finger, the handle of the knife and the blunt extremity of a director, and by cutting on my finger with a probe-pointed bistoury some firm membranous bands, which could not be easily broken, I succeeded, in the course of a few minutes, in extracting the entire tumor. On a careful examination no further disease could be detected in the orbit, and as no bleeding occurred, the globe of the eye was gently pressed towards its natural situation, the wound dressed, the parts supported with a compress and bandage, and the patient laid in bed, with strong injunctions to observe the strictest quietness.

The diseased gland was found, on examination, much larger than a walnut ; it presented, on the surface, which had been turned towards the eye, three considerable eminences, or lobes, with deep fissures between them ; it was almost as firm as, but

more elastic, than cartilage. A section of the gland exposed several small cartilaginous cysts, which contained a glairy fluid, and the interspaces consisted of a firm fatty substance traversed by a few membranous bands.

In two hours after the operation an alarming hæmorrhage took place : this, from the great depth at which the wounded vessel was situated, and the extensive extravasation of blood into the loose cellular tissue of the orbit, was with difficulty suppressed, by Mr. Benson, the resident pupil in attendance, making pressure with his finger. Dossils of lint were then introduced into the wound, and the bleeding did not recur. The patient passed a tranquil night, and for the first time for many weeks, enjoyed refreshing sleep.

On the following day the appearance of the eye and surrounding parts, was by no means encouraging ; the globe was protruded from the orbit as much as before the operation, by large coagula, which occupied the situation of the tumor ; the eye lids were affected with an extensive echymosis—they were as livid and as cold as if in a state of gangrene ; and the cellular tissue of the conjunctiva was distended with effused blood in all its dilatable parts. Notwithstanding these untoward occurrences, the patient had experienced much relief from the operation : she was free from acute pain, and the constitutional excitement was inconsiderable.

In the course of a few days the coagulated blood contained in the orbit began to dissolve, and suppuration was soon established : From that period the globe of the eye was observed to return slowly into its natural situation, and the conjunctiva and skin of the eyelids to assume their healthy appearance.

On the twelfth day after the operation the improvement in the position of the eye was quite evident ; but it was found impossible to prevent the eversion of the lower eyelid, in consequence of a thickened fold of the conjunctiva, which extended between it and the globe. To this fold the nitrate of silver had been frequently applied without any benefit ; I therefore removed it by excision, and was immediately enabled to replace the lid, which shewed no further tendency to become everted.

From this period the patient's recovery was uninterrupted, and she was discharged from the hospital on the 10th day of September, without any appearance of returning disease ; and although vision was totally extinct in that eye, yet the organ was perfectly sound, and its position almost natural.\*

\* Mr. Wright, of Ship-street, to whom I am indebted for having placed this patient under my care, was lately kind

Although very large tumours, producing exophthalmia and loss of vision, have been frequently removed from the orbit,\* yet the extirpation of the lachrymal gland is a rare operation. In some of our most approved treatises on diseases of the eyes it is not even alluded to. Mr. Warner states that he has extirpated this gland successfully; and Mr. Travers in his late publication informs us, that he removed it greatly enlarged, and in a state of true scirrhus. In Mr. Traver's case the vision of the eye of the affected side had suffered considerably during the growth of the tumor; in other respects the patient (a middle aged man) continued quite well, after an interval of some years.

Richerand gives us the following recital: "Guerin dit avoir fait l'extirpation d'une glande lacrymale squirreuse, et tellement gonflée, que le globe de l'œil en était entièrement recouvert. On ne

enough to visit her at her residence, and the following is his report of her situation at that time:—

"The eye at the side of the operation appears somewhat larger than the other, and the pupil is contracted nearly to obliteration. Vision of that eye is totally extinct. The inferior eye lid is in its natural situation, and the cicatrix on the upper lid is scarcely perceptible. The patient has suffered no pain since she left the hospital, and the deformity is very inconsiderable.

" THOMAS WRIGHT."

" Dec. 9th, 1821.

\* See Doctor Hope's case in Philosophical Transactions, An. 1744. Doctor Brocklesby, in London Medical Observations and Enquiries, vol. iv. Warner's Cases in Surgery, &c.



l'apercevait nullement, et l'on aurait pu le croire confondu avec la tumeur, si les phénomènes de la maladie n'avaient appris qu'il devait se trouver sain derrière elle. Guérin sépara la tumeur de l'œil et des paupières, et la disséqua avec tant d'adresse, que le muscle droit externe ne fut pas même entamé. Cette opération est puet-être l'uniquedans sou genre.”\* Other continental writers allude to M. Guerin's case, and to the operation of extirpating the lachrymal gland in terms very similar to the foregoing ; but Weller says, “there is no cure for a scirrhus of the lachrymal gland. Beer rejects its extirpation.”†

My friend, Mr. O'Beirne, one of the surgeons to the Charitable Infirmary, Jervis-street, has favoured me with the following interesting case, with which I shall conclude :

Thomas Cooke, of Longford, aged twenty-two years, strong and athletic, was admitted into the Infirmary on the 21st of December, 1820, with considerable deformity and imperfect vision of the right eye. The globe projected more by its semi-diameter than the sound eye, yet it was covered almost entirely by the upper eye-lid, which hung loosely over it, as if paralysed ; the pupil was dilated and insensible to light, the cornea lucida was turned to-

\* Nosographie Chirurgicale, t. ii. p. 31.

† Weller's Manual, p. 153.

wards the nose, and the puncta lacrymalia were patulous.

The upper and outer part of the orbit was occupied by a tumor, the outline of which could not be distinctly traced, but to its growth were attributed the protrusion of the eye, impaired vision, &c. The patient suffered considerable pain of the right side of the head and face, and much irritation and watering of the eye were produced by cold air, or particles of dust. All objects appeared to him doubled; and in walking or endeavouring to reach any object, his hand or foot generally fell short of it, so much so, as to prevent him from working even as a labourer. About two years before his admission, he perceived, for the first time, sparks, and occasionally, mists before his eyes, with sharp intermitting pains in that side of his head and face and in about a year a slight prominence and inversion of the globe were observed; from that period the symptoms have gradually proceeded to the state described above.

On the 29d it was decided in consultation, that the tumor should be removed, but it was not even suspected that the lachrymal gland was the part affected.

The operation was begun by an incision being made through the integuments of the upper eye-lid, which extended from the inner to the outer angle;

angle; the orbicularis palpebrarum being next divided, some portions of adipose substance which presented were removed. I then introduced my finger, and at once discovered that the disease was an enlarged and indurated lachrymal gland. The anterior surface of the tumor was exposed by dissection, and it was finally removed by cautiously working with the nail of the little finger, for it was not considered safe to introduce a knife into the back of the orbit.\*

On the tumor being removed, the pupil instantly recovered its contractile power, and the globe retired nearly to its natural situation; vision too was improved, but not perfectly restored. Scarcely any hæmorrhage ensued, and the wound was dressed simply. With the exception of a slight erysipelas of the scalp, which yielded to the usual remedies, the patient's recovery was uninterrupted, and the wound was completely healed on the fourteenth day after the operation. At that time vision was perfect, all pain and uneasiness, either from the disease or the operation, had subsided, and the eye occupied its proper place. The upper eye-lid however having continued so much relaxed as to obscure a great part of the cornea, a camel's hair pencil, dipped in sulphuric

\* The surface of the gland was granular, and of a pink colour. When cut into it presented a hard membranous, or rather cartilaginous centre, from which septa passed to the circumference. No sanies could be perceived. The gland was enlarged to at least six times its natural size.

acid, diluted in three parts of water, was drawn in the line of the cicatrix : in a few days the black mark sloughed, and the subsequent cicatrization of the ulcer contracted the lid to its natural state, and the patient was discharged cured.

J. O'BEIRNE, M. D.

*Dublin,*  
*December 24, 1821.*

Mr. O'Beirne has lately heard that his patient continued perfectly well, and suffered no inconvenience whatsoever from the loss of the gland.

**OBSERVATIONS**  
**ON THE**  
**TREATMENT OF THE**  
***DIABETES MELLITUS.***

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BY

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**SINCE** the publication of Doctor Rollo's Treatise on the Diabetes Mellitus, this disease has been investigated with more than ordinary attention : and, though no absolutely curative plan of treatment has as yet been discovered, still considerable progress has been made, and the disease has lost somewhat of its hopeless and intractable character. Much was expected from Dr. Rollo's mode of treatment by animal diet ; the efficacy of which was, at first, scarcely doubted. However, like other reme-

dies which have, for a time, been high in public estimation, it has lost much of the character it had acquired ; and will be found, I fear, greatly to disappoint the expectations of those who are disposed to place much reliance upon its virtues. An exclusively animal diet may, no doubt, and often does, alter considerably the sensible properties of the urine, and materially diminish its quantity : but even with the few who can endure, and will submit to such a restriction, it will be found to effect but little towards the removal of the disease. A partial adoption of this regimen will, however, be useful, and much merit is undoubtedly due to Dr. Rollo, not only for his discovery respecting the change produced in the saccharine urine, by a total abstinence from vegetable matter ; but also for the valuable light which his labours have thrown upon the nature and treatment of this terrible malady.

Amongst the remedies hitherto employed, opium, in very large doses, ranks highest : it possesses the property of checking and restraining the flow of urine, and depriving it of many of its morbid qualities. Its effects, however, are of a transient nature : when the medicine is withdrawn, the complaint recurs ; it may again and again check its progress, but the tendency of the disease towards a fatal conclusion will not, I apprehend, be ultimately prevented. A permanent cure of the Diabetes Mellitus has rarely been accomplished.

A perfectly successful mode of treatment yet remains to be discovered. Every step, which is made towards the attainment of this desirable object, is in itself valuable, and may also lead to still further advances; till, at length, we may become possessed of the ability to rescue, a considerable proportion of those who are affected with the disease, from a lingering and miserable death.

A well-marked case of the Diabetes was, not long since, placed under my care. From the wish to afford all possible relief, I anxiously referred to every source, whence useful information might probably be derived, and was thereby led to an attentive perusal of the several treatises and detached cases of this disease, which have, from time to time, appeared. In the works of the older writers, little if any valuable matter respecting the treatment will be found: indeed, until the period, at which Dr. Willis made the curious discovery of the existence of sugar in diabetic urine, all the recorded histories of this complaint, are marked by vagueness and uncertainty; and are as applicable to any form of diuresis, as to that in which the urine is saccharine. While employed in turning over the several works written on this subject, my attention was particularly arrested by the following important considerations: First, in many of the cases whose histories are recorded, the earliest disturbance in the general health could distinctly be traced to some cause acting upon the skin, and producing derangement

of its functions. Secondly, *every* case of the Diabetes Mellitus is accompanied with a peculiarly morbid condition of the skin. In truth, I know not any disease, in which this symptom is so uniform and so remarkable. Thirdly, none of the remedies employed produced the slightest beneficial effect, until the skin began to relax, and a sweat to appear on the surface.\*

These considerations led me to turn my attention more particularly to the state of the skin, and sug-

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\* See two cases of Diabetes treated by opium. *Transactions of the London College of Physicians*, vol. iv. In Case I, it is stated, p. 198, that "the opium produced considerable perspiration, and on the following morning the urine was no longer sweet. The patient had felt great relief from languor since the opium had been resumed." In Case II. p. 208, it is observed that, "during the period in which the dose of opium had amounted to ten grains (taken four times in the day) the patient had perspired profusely, had been sleepy and giddy, but had suffered no other inconvenience: the urine had a natural appearance and odour, and yielded a very inconsiderable extract." A case is recorded by Dr. Darwin, in which opium produced salutary effects, at a time when it caused the patient so to sweat, "that large drops stood on his face, and all over him." Another case is mentioned by the same author, in which a course of astringent and tonic medicines did not in the least benefit the patient. Opium was at length given; it excited profuse perspiration, and great relief ensued. Emetics have been useful, so far as they have been effectual in determining to the surface. The Hepatized Ammonia has also had the effect of promoting perspiration. Antimonials, when effectual in exciting diaphoresis, have likewise been found useful. Blood-letting and the warm-bath are valuable remedies, and their utility will be found proportionate to the power they possess of re-establishing the functions of the skin. See Watt on Diabetes, pages 27, 28, 29, 36, 38, 151, 152, 155.



gested the probability of advantage arising from the application of *vapour* to the whole surface of the body. The vapour bath was employed. The impression made upon the disease by the frequent use of this remedy surpassed my expectations. Its salutary effects, in giving a new action to the skin, were immediately perceptible. The perspiration having been afterwards maintained by warm clothing, and continued bodily exercise, the patient daily improved in health; and at length quitted the hospital, under the conviction of his disease being wholly removed. Before entering upon the particulars of this case, I shall briefly state two observations obtained, the one from Dr. Rollo's book, the other from a treatise written by Dr. Latham. These observations appear to me peculiarly important; as, in both instances, the only operative remedies were those which established upon the surface an abundant perspiration. In the first, the effect was produced by the tepid bath; in the second, by bodily labour. To these facts an additional value should also be attached, because, unwarpd by any theory, they are simply, and as it were accidentally stated.

In the second edition of Rollo on Diabetes, p. 183, there is a communication from Dr. Gerard of Liverpool. In the case given by Dr. G, the first observable symptom was a diminution of habitual perspiration: afterwards it totally ceased; and at length "the cuticle became unnaturally dry, harsh, and rough, and to all appearance dead, and incapable of perspiration, absorption, or any kind of transmission."

With this state of the skin was connected the ordinary symptoms; thirst, increased appetite, languor, debility, and saccharine diuresis.

In the sole view of determining, by experiment, the existence or non-existence of cutaneous absorption, this patient was immersed, every successive or alternate day, in water raised to a pretty high temperature; the weight of his body having been carefully ascertained, both before and after each immersion. An attempt was made to restrict him to animal diet: medicine of every kind was intentionally withheld. The warm bath was first used on the 12th of February. On the 22d, there was a considerable diminution of the quantity of urine; its smell was urinous, and the extract less sweet; the weight of the body was encreased, and it was observed, the dead cuticle began to come off.

24th. On this day he used the bath at the temperature 100°, and remained in it fourteen minutes.

25th. "The dead cuticle is peeling off; and he is "obviously improving in every respect, and gaining "weight." Bath continued at the same temperature, and employed every day till the 20th of March.

For several days, at the beginning of March, he lost ground, in consequence (as I conceive) of considerable disorder in the stomach and bowels. During the continuance of this derangement in

the functions of the abdominal viscera, the cuticle did not come away as before, nor did the patient sweat. On the 21st of March, the non-existence of cutaneous absorption having been satisfactorily proved, the warm bath was laid aside.

28th. " He has had a considerable and general perspiration last night ; his thirst and appetite are moderate, and he is quite free from pain." At this time the disorder of the bowels appeared to subside ; the functions of the skin became more natural ; and he began evidently to gain ground.

April 7th. He used the warm bath to cleanse his skin, when a large quantity of the dead cuticle came off. Cold bath ordered.

8th. Urine four pounds thirteen ounces ; it is not sensibly sweet. He felt very warm and comfortable after the cold bath, and rested well at night : his appetite and thirst are moderate. He was now a second time thrown back by disorder in the digestive organs ; but soon afterwards he began again to improve.

29th. Urine three pounds three ounces. " He had a copious perspiration in the night, which continued about four hours."

May 1st. " He perspired much in the night, but it does not weaken him."

6th. On this day it was discovered, that the patient did not adhere to the plan of animal diet longer than the first fourteen days. During the remaining (as is distinctly stated by the author himself) " he partook, with the other patients, in " the common mixed diet of the house."

17th. " Urine four pounds ten ounces ; it is neither sweet, nor in any over proportion to the fluids taken in ; nor will it ferment, although he has lived chiefly on vegetable matter and milk, since the 6th instant. He has had copious perspirations these two nights past."

25th. " He was discharged from the Infirmary, to all appearance cured of the disease ; which, to his own thinking, has long been the case ; and to the opinion of his being *even cured*, I have no hesitation in subscribing."

This case, the details of which are in Dr. Rollo's book, possesses peculiar value. Medicine was not administered ; nor was animal diet, except during the first fourteen days, adhered to ;\* and

\* It is scarcely credible to what a degree an exclusively animal regimen is loathed by the diabetic patient. Dr. Gerard in the narrative of the case referred to in the text, whilst expressing his disappointment at being deceived by his patient, speaks of the " irresistible propensity to more or less of vegetable diet, as one of the characteristic symptoms of the disease." (Page 223.) So prone are such patients to practise deception in this matter, that the adoption of the animal regimen, during even

yet there is here presented to us, as perfect an instance of recovery as any on record. To what then is the cure of this patient to be ascribed? Not certainly to a few days adherence to animal diet; for it was nearly three months after the exclusively animal regimen had been laid aside, (and at a time too, when the diet was chiefly vegetable) that the most marked and decided amendment of the symptoms was manifested. Since therefore no medicine was given, and little, if any effect, can justly be attributed to the short restriction to animal diet: it obviously follows, that the warm bath (which was not used as a remedy, nor was its efficacy in the least suspected) was, in reality, the one and only efficient mean of cure. This opinion is likewise corroborated by the fact, that, in the same proportion as the morbid cuticle was detached, and abundant perspiration established, so did all the symptoms of the disease subside. The second observation derived from Dr. Latham's book, I shall quote in his own words :\*

“ The first case I remember to have seen, was  
“ in the Ratcliffe infirmary at Oxford, under the care

fourteen days, seems to me more than questionable. My patient deceived even those in the ward with him; and devoured, in secret, the skins of potatoes, and every vegetable substance he could lay hands on. The loathing of animal food is so very constant a symptom, that there arises from this circumstance alone an insuperable obstacle to the cure of the disease by animal diet.

\* See Latham on Diabetes, p. 190.

“ of the late Dr. Parsons, then clinical lecturer in  
“ in the University : the impression of its being an  
“ incurable disease, which the medical pupils received  
“ from the professor, was sufficiently fixed in their  
“ minds by the inefficacy of the remedies which were  
“ from time to time prescribed for the patient’s  
“ relief : worn out with expectation, and despairing  
“ at last of receiving any benefit, he was at his own  
“ desire put upon the list of out-patients, and re-  
“ quested to come occasionally to the Infirmary, that  
“ the pupils might have the opportunity of seeing the  
“ progress of the disease, rather than with any ex-  
“ pectation of a prosperous issue to the complaint : a  
“ few weeks elapsed before he returned to us, and to  
“ the great astonishment of all we found him im-  
“ proved, not only in his appearance, but also very  
“ materially in the urinary discharges. His own  
“ account was, that, weary of life, and destitute of  
“ every ray of hope, he had wandered about, as well as  
“ his strength would allow him, for a few days amongst  
“ his fellow-labourers of the neighbourhood, and  
“ finding, from this exertion, that his strength did not  
“ decrease, he was tempted to take a part in the work  
“ that was going forwards ; that a copious perspiration  
“ very soon ensued, under which he did not feel him-  
“ self weakened in bodily powers, but rather improved  
“ in spirits ; that he renewed the same sort of easy  
“ occupation from day to day, with the same comfort-  
“ able event ; and that at last not only his spirits but  
“ his bodily strength was manifestly increased ; his  
“ urine, however, was then neither perfectly natural  
“ in smell or taste or quantity, although in all these  
“ respects it was certainly much amended. He visited

“ the Infirmary a few times afterwards at irregular intervals, and at last ceasing to attend, we concluded, from the progress made towards recovery, whilst he continued his attendance, that he probably had been fortunate in experiencing a cure: And had we been then as convinced of the efficacy of animal food in Diabetes as we now are, we should probably have thought that the provincial diet of that district might possibly have contributed to his relief, for the poorer sort of labourers usually lived upon a large onion with fat bacon, and no great portion of bread.” I fancy the reader will be disposed rather to attribute the amendment in the state of this patient’s health, to the free perspiration caused by bodily labour, than to the large onion, or even the fat bacon.

I shall now proceed to relate the principal facts of the case of the Diabetes Mellitus, which I have lately had under my care ; and which strongly illustrates the value of those remedies, by which a copious and continued diaphoresis is most certainly produced.

—— Riddall, æt. 20. A shoemaker ; hair and eyes dark ; conjunctiva clear and pearly ; lines of the muscles distinctly marked ; complexion sallow ; emaciation extreme ; veins prominent and full ; skin a dingy yellow, permanently arid, and glued apparently to the subjacent muscles ; gums ulcerated ; a small unhealthy ulcer on the right cheek ; epigastrium tumid ; tongue florid at margin and point, and covered in other parts with a thin whitish secretion ;

extreme listlessness, languor, and debility: a sensation of weakness (referred to the knees) so great, that it is with difficulty the weight of the body is supported; dimness of vision; sleep broken and disturbed: he is much distressed during the night by spasms in the lower extremities: though constantly placed before a large fire, a sensation of creeping coldness is always present. Appetite inordinate; thirst unquenchable; mouth clammy; digestion rapidly performed: a craving sensation recurs soon after food has been taken; costiveness; there is a constant desire to pass water, which is increased during the night. From twenty to twenty-two pounds of urine are passed ordinarily during the twenty-four hours; the bubbles remain on its surface; it is limpid and almost colourless; its smell peculiar, and not easily to be described; its taste very sweet; when evaporated there remains an abundant extract resembling coarse brown sugar; pulse 88, full and throbbing; neither cough nor dyspnoea: such were the symptoms which manifested themselves at the time of his admission into hospital, which was toward the end of the month of December.

I obtained from him the following account of the state of his health, previously to the time of his admission. In the beginning of last November, he embarked at Liverpool, in a vessel destined for Dublin. He was then in perfect health; a violent storm came on; the loss of the vessel was hourly expected. He was four days at sea, and during the greater part of that time, was to his knees in water;



he was chilled with cold ; and for the last two days there was not any supply of provisions. After quitting the vessel, he felt himself constantly chilly, and could not by any means (to use his own expression) "get warmth into him." A thirst so intense came on, that he was perpetually swallowing large draughts of water : he preferred cold drinks. In describing the symptoms, he dwelt a good deal upon an unusual dryness of the skin, and a total absence of perspiration, since the time of his sea voyage ; his sight also grew dim ; his bowels were costive. In consequence of the excessive keenness of his appetite, his complaints became a subject of ridicule : languor and debility, notwithstanding the large supplies of food, daily encreased ; and at length he found himself so weak, that he was obliged to abandon his ordinary occupation, and make the best of his way to town to seek relief.

On the 1st of February, ten ounces of blood were removed by the lancet ; the serum was milky ; the crassamentum firm : the loss of blood did not in any manner affect the symptoms. From this time, on to the 2d of March, mercury was used, externally and internally, in large quantities ; no feter of the breath, no increased secretion of saliva, nor any other symptom indicating the presence of mercury in the system, was perceptible. Only whilst using that medicine, he evidently lost ground, and became, by degrees, so very weak, that he was no longer able to leave his bed. His bowels were regularly evacuated by doses of *Caster oil* and *Tincture of*

**Senna.** His diet was chiefly vegetable ; his ordinary drink the Inf. Lin. and water.

On the 2d of March the vapour bath was used for the first time. No very perceptible effect was produced. This remedy was repeated on the 9th, 12th, 16th, and 26th. The symptoms still unabated : there was, perhaps, some slight accession of strength.

From the 2d to the 27th of April, all treatment, except daily purgation, was laid aside. The flow of sweet, and almost colourless urine, in the course of the day and night, often exceeded twenty-four pounds. The necessity of assuaging his thirst, and voiding his urine, was so continual during the night, that he could scarcely obtain any sleep. He was now reduced to a state of alarming debility. On the 27th of April, he was again placed in the vapour-bath ; half an ounce of the Tincture of Opium was mixed with the water which was to be converted into vapour. He remained in the vapour-bath twenty minutes. On being replaced in bed, syncope came on, from which he recovered very slowly ; he then became feverish and hot ; at length the skin gave way, and the whole surface of the body was soon covered with sweat. He felt, he said, immediately relieved ; and on the following day was much better.

On the 4th of May, he was again put into the vapour-bath, to which the Tincture of Opium, as before, was added. There was not, on this occasion,

any tendency to faintness: it excited copious perspiration, and he had a sound and refreshing sleep.

On the 10th of May, the following note was taken of his case: strength improves daily; he feels much less languid; skin soft and perspiring; pulse 88; a whitish secretion covers the tongue; appetite less craving; improved sleep; he grows fat; gums continue ulcerated and sore; and the ulcer on the inferior maxilla is still open.

May 18th. The urine, almost colourless and very sweet, amounted, during the preceding day and night, to full twenty-four pounds. His thirst was very urgent. His weight on this day was seven stone ten pounds.

May 22d. A temporary diarrhoea, with griping pain, was produced by repeated doses of the Colocynth pill. The urine, during the encreased action of the bowels, was observed to assume an amber colour, and to acquire an urinous odour; to be much diminished in quantity, and to have a taste less sweet. The tongue was cleaner; the feces yeasty; the mouth parched; no perspiration; skin very itchy.

May 30. Urine, though more amber-coloured, amounts to twenty-one pounds; pulse 100; no perspiration; an exclusively animal diet, with lime water and milk, had been for some time enjoined: the pa-

tient, however, devoured in secret whatever of vegetable food he could procure: he said that much meat at a time lay heavy on his stomach, and greatly oppressed him.

June 3d. A remarkable change in the symptoms was observed: for the last twenty-four hours the urine did not exceed eight pounds; during the preceding day and night perspiration flowed generally and profusely; there was a great accession of strength, and diminution of thirst and appetite. The abundant and continued sweating was produced by laborious exercise, while the body was enveloped in thick flannel, and the weather unusually warm. The first efforts at bodily labour were difficult and reluctant. The patient in the morning, when commencing the work of the day, could hardly move his spade; he was, however, prevailed on to persevere: by and by he began to work with more ease to himself; and before the close of the day, when perspiration was fully established, the labour was easy, and the fatigue trifling. From this period to the beginning of July, medicine of every kind was abandoned. He worked very hard every day; was warmly clad, and sweated much. His food was principally vegetable: he daily gathered strength and weight; enjoyed sound undisturbed sleep, and felt himself so far relieved, that he was resolved to return immediately to his home and former occupation. From the slightly saccharine taste of the urine, and the continued ulceration of his gums, I

strongly urged that he should not yet remove himself from medical superintendence.

July 27th. Bowels costive; urine sweet, light-coloured, and moderate in quantity; tongue much cleaner; free perspiration; he rose but once during the night; thirst, though much abated, continues; weight eight stone thirteen pounds. For several days past he had ceased to work; the vapour-bath has not been used, nor any medicine given; a perspiring state of the skin, however, has continued.

August 4. He has been for some days restricted to a diet exclusively animal; he has adhered strictly (as far as I could learn) to the regimen prescribed; his ordinary drink was milk with lime water, and beef tea; the weather was very warm, and the patient's body entirely enveloped in thick flannel. An itchy, slightly elevated, pale red eruption was thickly and universally diffused over the surface of the body. His pulse beat steadily 120 strokes in a minute, and was throbbing and full.

August 10th. Pulse still 120. Diet consists in eggs, beef, mutton, soup and milk. The serum of blood taken yesterday from his arm, was white like milk; sixteen ounces of blood were at that time removed: his strength, by this evacuation, was not in any degree impaired: the pulse fell to 104. Perspiration continues; urine, within the last twenty four hours, has amounted to eight pounds; the taste not sweet; the colour a deep amber: sleep natural.

This day he complains of thirst, which has not been the case for several days past.

On the 12th of August, after a meal of fat meat, he was seized with severe vomiting and retching, and spent a feverish and restless night. On the following day, the pulse throbbed strongly, and rose to 120; he loathed food of every kind; had intense head-ache, panted for breath, and seemed like one suffocating. Fourteen ounces of blood were removed; the appearance of the serum was altogether altered; it was now perfectly transparent, and had a slightly greenish tinge: those urgent febrile symptoms he attributes to the animal regimen, from which he had not, for some days, deviated. He said that fat or rich meat particularly disagreed with him. Urine slightly saccharine; much more deeply coloured, and considerably less abundant; skin thickly covered with an eruption of the same nature as that already described. The dyspnoea was so urgent that it gave to his countenance an expression of wildness. He was very restless, and continually changed his position. His skin was intensely hot. The flannel dress was laid aside, and he lay uncovered, except by a single sheet. His thirst was not to be appeased, and his appetite was wholly extinguished; the epigastrium was tumid and painful. By pressure at that region of the abdomen, the dyspnoea and suffocative sensation were very much augmented. Leeches were frequently and numerously applied at the epigastrium; the bowels maintained in a lax state by the daily exhibition of purgatives, saline draughts

repeatedly administered, and opium, in large doses, given at night. After each application of the leeches, the respiration became freer and easier. In a few days, the febrile symptoms subsided, and left him weak, languid, and emaciated. The rapidity, however, with which he regained health and strength after the cessation of febrile action, was remarkable: his skin continued soft and moist, but not profusely perspiring; his pulse did not rise beyond eighty in a minute; his sleep was undisturbed; his appetite moderate; and there did not remain any inordinate thirst. The quantity of urine varied from six to eight pounds, during the day and night; it was rather light-coloured; the taste salt and slightly sweet; he weighed eight stone four pounds. Under these circumstances, towards the end of the month of September, he quitted the hospital. I saw him on the first of January, 1822. There was not any return of the symptoms; the skin retained its natural and softened feel; he weighed eight stone five pounds; his pulse was moderate: the expression of his countenance very much improved: though not exempt from thirst, it gave him no annoyance: his tongue was whitish; he felt strong, and alive to every enjoyment; he worked at his trade as a shoemaker, from an early hour in the morning, with little intermission, until late at night; his diet consisted of bread, butter, occasionally meat, fish, potatoes and gruel: the gums were very slightly ulcerated; the bowels, without medicine, were daily evacuated; the general quantity of urine, in the course of a day and night, varied

from six to seven pounds ; taste salt, slightly saccharine ; colour still paler than natural.

Such are the leading facts which belong to this case. I regret that the specific gravity of the urine was not at any time ascertained, and that this fluid was not, during the progress of the disease, subjected to chemical analysis. Attention to these points would have rendered the history of the case much more complete. Such as it is, however, it exhibits, in a striking point of view, the powerful effects of copious perspiration, produced by the vapour-bath and muscular exertion, in controlling and restraining the symptoms of the Diabetes. That many have attempted the cure of this disease by diaphoretic remedies, I am well aware ; but the attempt has been made rather through the medium of medicines taken into the stomach, than by means of remedies designed to act directly upon the skin. That internal remedies should have failed is not surprising, when we consider, that the constitution of a person labouring under this affection, will resist the action of the most powerful medicines, even when exhibited in the largest doses. It is singular to what an extent opium, antimony, and other drugs may be administered, and yet little or no effect be produced. The warm-bath has been used,—but it has been used only occasionally : it has been employed as a secondary remedy, as one of minor importance, and not as one, which, if properly managed, is of itself sufficient to effect a cure. Its daily employment for weeks, nay months, may be requisite to bring about



that relaxed and freely perspiring state of the skin, without which, whatever temporary abatement in the symptoms, or diminution in the flow of urine, may have taken place, not one step has, in reality, been made toward the accomplishment of a cure.

In the case just related, the cessation of accustomed perspiration, and the perpetual chillness, were symptoms, which strongly indicated the necessity of remedies capable of recalling the suppressed and interrupted functions of the skin. The patient had enjoyed perfect health until the period of his long exposure to wet and cold. His habits of life had always been temperate; there was nothing, except the circumstances of his voyage, which could in any manner account for the disease.\* It ought likewise to be noticed, that, *previously* to the perception of any other symptom, the coldness of the surface and dryness of the skin existed. These symptoms did

\* The same cause in different individuals, according to their several predispositions, produces very different effects. I had under my care in the hospital a man who sailed in the same vessel, and was exposed to the same causes of disease as Hiddal. He, in like manner, for some time afterwards, felt cold and chilly, but the disease with which he was attacked, was an intermittent fever. It is remarkable that this man's ague, though it had resisted bark given in the very largest doses, yielded easily to a moderate course of mercury, aided by opium and antimonial wine. In addition to these remedies the Pediluvium was used every night, and free perspiration established. It may be worthy of remark that this person had been, nineteen years before, affected with the same disease, at a period when intermittent fever prevailed very generally at Drogheda and in its vicinity.

not at any time disappear until, after the repeated use of the vapour-bath, the functions of the skin were beginning to be restored ; from the moment the pores were opened, the sensation of chiliness ceased. How far the Tincture of opium may have conduced to the efficacy of the remedy, it is not easy to determine. Once, after the opiated vapour-bath, the patient's sleep was much more heavy and protracted than usual. Such an effect might have been produced by the opium ascending with the vapour ; this, however, is by no means certain. To establish the value of opium thus externally applied, numerous observations are necessary. Having once succeeded in bringing out a moisture upon the surface, it yet remains—a task of no small difficulty and importance—to maintain a permanently relaxed and moistened condition of the skin. To attain this desirable object, exercise and warm clothing, as remedies, claim peculiar attention. Riddal had not been working in the garden two days, when the urinary secretion was diminished to one-third of its ordinary quantity ; this change was accompanied with a corresponding mitigation of every other morbid symptom. With patients in the better ranks of life this remedy (which I conceive to be one of high importance) is practicable at every season of the year. Active exercise on horseback will excite perspiration, without producing fatigue.\* To this

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\* It is important that the convalescent from the Diabetes should not suffer even a single day to elapse, without engaging

remedy the patient will, at first, be extremely averse: he will himself, however, soon discover its value, and be inclined to persevere in its use. It will require a very considerable effort to overcome the inertness and languor, which hang over the diabetic patient. If, however, the remedy be so managed as to determine powerfully to the surface, it will be accompanied by a degree of vigour and exhilaration sufficient to ensure its being, for the future, persevered in: not so with blood-letting, opium, emetics, animal diet, and other remedies usually resorted to. The proposed plan of exciting diaphoresis by means of muscular action, is well calculated, not only to check the progress of the disease, but also to obviate the liability to a relapse. This is a matter of no small importance; for it rarely happens that a fully formed Diabetes (I mean that in which the urine is decidedly saccharine) is radically and permanently cured.

This case shews, that a temporary diarrhea diminishes the quantity, and alters the quality of the urine. I have at present under treatment in the hospital, a man, named Hughes, labouring under the Diabetes, for whom the following purgative was directed: *R. Pil. Colocyn. gr. xii. Ol. Croton.*

in such exercise as shall determine powerfully to the skin. The advantages of exercise may be obtained in a variety of ways, such as in walking, dancing, fencing, &c. The patient who is fond of riding may procure that enjoyment in a riding-school or other similar enclosure, even during the severest weather.

*guttas ii. M. F<sup>m</sup>. Pilule sex : sumatur una tertiâ q.q. horâ, donec alvus soluta sit.* This poor man, concluding that he could not take too much of a good thing, swallowed the whole at once: he was largely purged, but not nauseated; for several days afterwards his bowels remained tender and painful. So long as the diarrhea continued, the urine was scanty and high-coloured: hence it would appear that, in the treatment of the Diabetes, daily purgation should not be omitted. Sufficient diaphoresis once established, the bowels will easily yield to mild purgative medicines. From this case we also learn, that the sweating treatment ought not to be pushed too far, lest cutaneous eruption, troublesome and difficult of cure, should ensue. In Riddal's case, the exclusively animal food produced a high and dangerous fever;—no uncommon consequence of such a regimen. In several of the recorded cases a similar effect was produced. In a young woman, named Galbraith, treated for the Diabetes at the Whitworth Hospital by my friend Dr. Cuming, and now under my care, fever was twice caused by the animal diet. We may, I believe, with certainty conclude, that a full indulgence in animal food, while at the same time the body is not exercised, must end in the production, either of some febrile disease or of local inflammation. I cannot therefore but object strongly to that mode of treatment, which would enjoin upon the patient at once a strict adherence to the animal regimen, and abstinence from exercise and bodily labour. I know not any disease in which a carefully regulated

diet is of more importance than in the Diabetes. The appetite is morbidly keen; its full gratification will certainly overload the stomach, and create much distress. Fulness at the epigastrium is a very frequent symptom, as also a sensation of heat and spasmodic constriction and tightness about the region of the stomach; these feelings are always increased after a full meal. In looking over the notes of several cases of this disease treated by Dr. Crampton,\* I find that, in one instance, blood was vomited. In the Dictionaire des Sciences Médicales, an account is given of the dissection of a diabetic subject, performed by MM. Dupuytren and Thenard, amongst other morbid appearances, we find the following: "l'estomac était extrêmement volumineux (cinq à six pintes de capacité); les vaisseaux de cet organe, très-dilatés, formaient, à la surface interne, un réseau très-rouge et plus développé que de coutume. Le duodénum, le commencement du jé-

\* Whilst providing materials for clinical observations on the case of Riddal, who was then in Hospital, Dr. Crampton kindly furnished me with notes of several valuable cases, which fell under his observation and treatment, both in Hospital and private practice. In almost all of them, there was fulness about the epigastrium or uneasiness on pressure. In all, without exception, the skin is described to have been dry, harsh, asserine, or scaly. In several, cold and wet were the immediately exciting causes of the disease. Emetics, bleedings, purgatives, warm baths, and the Hepatized Ammonia, were the remedies principally employed. In all, the progress toward a cure kept pace accurately with the effects produced by these remedies in restoring the functions of the skin.

junum, et le cœcum étaient un peu plus rouges et un peu plus épais que dans l'état naturel." The fulness and tenderness about the epigastrium, as well as the appearances in this almost solitary instance of dissection, would lead us to avoid every stimulating article of diet, and restrict the diabetic patient to moderate allowances of such food as is most easy of digestion. In Galbraith's case, the diet consists of bread, a small allowance of meat, and a larger proportion of well boiled rice. This diet agrees well. Her common drink is the Carbonated Lime water; which, she says, appeases her thirst more effectually than any fluid she has ever taken. This patient has been much benefited by the frequent application of leeches at the region of the stomach. She has now laboured under the disease upwards of four years. An exclusively animal diet obtained, in her case, a full and fair trial. Under its use the urine was rendered less abundant, and more deeply coloured; she did not, however, notwithstanding the diminished secretion of the kidneys, gain weight, or recover her strength and spirits. Her thirst was intense; she loathed animal food. To her opium also was administered in large and repeated doses: no sweat was produced: the relief resulting from it was slight and temporary. The vapour-bath, frequently repeated, has caused heat of surface, and an aggravation of the symptoms, and has altogether failed to excite perspiration. After repeated efforts, a perspiration has at length been produced.

This was effected in the following way : For the purpose of softening the dry and thickened cuticle, the whole surface of the body was rubbed over with oil :\* the patient was then put into a warm bath, and the body washed with soap until the oil was completely removed. After this process had been three or four times repeated, a copious and general perspiration was excited. In the view of maintaining the cutaneous discharge, the Dover's powder is daily administered in small and frequently repeated doses ; and the bowels kept free by means of the *Pil. Gambog. Comp.* Under this treatment she is gradually gaining weight ; her spirits, strength, and expression of countenance, are improved ; there is also a corresponding diminution in the quantity of urine : it is only now that the remedies are beginning to produce the desired effect. Her disease has been of long standing,† and is peculiarly obstinate. Her case, however, as well as that of Hughes, (both of which I have now under treatment) I reserve for a future communication. It is remarkable that, in both these cases, the disease is connected with distress of

\* This process of oiling the surface was used by Dr. Rollo in the view of preventing cutaneous absorption : the object was unnecessary ; the effect produced, in softening and relaxing the cuticle, salutary.

† This girl observed her hair to fall at the same time that the thirst, appetite, and flow of urine became inordinate. About three months ago her hair was shaved off. Since that period it has grown to the length of about an inch.

mind. Hughes was in perfect health until he received a dreadful shock, in the sudden death of his only son—a fine lad of eleven years, who, whilst going on a message to his father, was caught in a mill, and, in an instant, torn to pieces: the poor man did not afterwards hold up his head; by degrees the symptoms of Diabetes came on; and he is still low-spirited and broken-hearted.

There are not any functions in the body more closely connected and interwoven, the one with the other, than those of the skin and kidneys; by both these organs substances, either deleterious or useless, are carried off from the animal economy. When, from any cause, the secretion of one is increased, that of the other is proportionably diminished. They seem each capable of performing an action vicarious to the other; whence it would appear highly probable, that very similar substances are expelled from the system by both these outlets. It is also remarkable that medicines, derived either from the vegetable or mineral kingdoms, possessed of diaphoretic properties, may, by a slight alteration in the mode of exhibition, be rendered diuretic. So closely connected are these two functions, that the same substances will act as excitants both to the one and to the other. This connexion between the skin and the kidneys did not escape the notice of the accurate author of the *Cyropede*; as appears from the account he gives of the



manner in which the Persian youth were educated :\* he notices their moderation in food, and their “working off” (ἐκποιεῖσθαι) that food by exercise. He speaks of it as a disgrace to be seen retiring for the purpose of making water, or of any other evacuation : this, he observes, could not be the case, unless they made use of a restricted diet, and *consumed the humours by exercise*. Here is accurately described the plan of treatment by which the excessive flow of urine in the Diabetes will most effectually be checked. By acting powerfully upon an organ, which is more intimately connected with the kidneys than any other in the body, the physician is furnished with a weapon capable of restraining, and even subduing, this formidable disease.

The remark has been made, that England, above all other countries, is that in which the Diabetes is most prevalent. It has been attempted, in various ways, to account for this. A very general explanation is, that in these countries the disease is excited by the habit of drinking tea, punch, and

\* Καὶ νῦν δὲ ἔτι ἱμῶνι μαρτυρεῖται καὶ τῆς μετριᾶς διαίτης αὐτῶν, καὶ τῷ ἐκπονεῖσθαι τὴν διαίτην. Αἰσχρὸν μὲν γὰρ ἔστι καὶ νῦν ἐστὶ Πέρσας καὶ τὸ ἀποπνεῖν, καὶ τὸ ἀπομύπτειν, καὶ τὸ φύσας μετὰς φαίνεσθαι αἰσχρὸν δὲ ἔτι καὶ τὸ λόντα πεφανεῖν γινώσθαι ἢ τῷ ὕρπασαι ὕδατος, ἢ καὶ ἄλλῃ τινὲς τούτων. Ταῦτα δὲ ἐκ ἰδύνασθαι ποιεῖν, εἰ μὴ καὶ διαίτη μὲν ἡ ἐκείνη, καὶ τὸ ὑγρὸν ἐκποιεῖν ἀνάγκη, ὅτι ἄλλα καὶ ἀποχωρεῖν.

other diluting fluids ; but were this the real cause, the disease should abound still more in France, where the natives freely indulge themselves in the weak and acid wines of the country. Potatoes, the reputed cause of so many ills, have not been suffered to escape without blame ; but I more than doubt that this disease has ever been caused by a vegetable diet ; even were this the case, it surely would not account for its predominance in England, the country in which of all others the largest proportion of solid meat is consumed. No peculiarities of regimen will, I am persuaded, account for the greater prevalence of this disease amongst us : the true cause is of a very different nature, and may, I think, be traced to the fact, that, diseases arising from atmospheric vicissitudes are more numerous in England than in any other country ; amongst these the Diabetes may be classed. Suppressed perspiration, especially if connected with distress of mind, fear and apprehension, does more frequently than any other cause, give rise to this complaint. It would be interesting to ascertain whether the disease be rarely or frequently found in steady and warm climates—in climates where the heat of the atmosphere maintains an habitually, relaxed and perspiring state of the skin. This enquiry is interesting in a double point of view, both because it would throw light upon the connexion between the skin and the kidneys in the Diabetes ; and also, should it appear, (as I suspect) that the true saccharine Diabetes is a rare disease in warm climates,

it would lead those who can afford to travel, and who have derived benefit from medical treatment, to quit for a while a country, in which every diabetic patient, however much the symptoms may have been relieved, is continually prone to relapse. It may be, that a residence of a few years in a warm climate would completely eradicate the disease. This is an important consideration, and well worthy the attention of medical men.

In the wonderful accounts which are to be found in the works of some authors (for there are persons, who, not satisfied with the ordinary operations of nature, love to go in search of the marvellous) of the immense excess of the egesta above the ingesta, it seems to have been forgotten, that excretion by the skin is at an end. All that should have been removed by secretion from the surface of the body is carried off by urine; besides, there is scarcely any pulmonary exhalation, and the feces are almost dry: the tears and saliva are scarcely secreted; even ulcers cease to discharge; so that all the humours of the body are passed off by the kidneys; the urgency of the thirst calls for a large and continual supply of fluids: the patient drinks more abundantly than his medical attendant is aware of. If then all these circumstances are unitedly taken into the account, it will, I imagine, be found, that there is not such an immense disproportion between the ingesta and egesta, as some would lead us to think. That the more solid particles destined for nutrition are carried off by urine, is certain. It is one of the essential

characters of diabetic urine—whether animal or vegetable diet has been used—that the specific gravity is raised beyond the standard of health ; hence nutrition is defective, and the body wastes ; there is also a degree of irritative fever, which, like hectic fever, interferes with and prevents the process of nutrition : this state of irritation in part accounts for the great value of opium in treating the Diabetes.

Dr. Prout suspects that the urine is albuminous before it becomes saccharine : this may be true ; and it is a fact important to ascertain, as the knowledge of it might enable the practitioner to meet the approaching evil, and prevent the full development of the disease.

Dr. Rollo mentions the case of a female, in whom habitually, and whilst in apparent health, the urine was insipid at one o'clock, after dinner saccharine, and natural in the evening. From this it appears probable, that however completely a Diabetic patient may appear to be cured, the urine will ever after retain a slightly saccharine impregnation.

In a case which I lately treated, there was exhibited in a remarkable manner the power possessed by the vapour-bath, of diminishing the urinary secretion. The patient, to whom I allude, laboured under pulmonary disease, the result of frequent and neglected colds : he had lived in habits of intem-

pearance, and almost daily intoxication. In addition to the pulmonic symptoms, he was harassed by an intense thirst : he drank many quarts of cold and acidulated water in the course of the day ; his skin was scaly and dry ; the mucous membrane of his mouth parched and intensely florid ; the secretion of apparently healthy urine amounted habitually, in the course of twenty-four hours, to not less than sixteen pounds. For him the vapour-bath was directed. Though weakened and much emaciated he bore the bath without inconvenience : an abundant and general perspiration was produced ; the thirst ceased ; and the urinary secretion fell almost immediately to its ordinary standard.

The cure of a disease, so obstinate and fatal as the Diabetes Mellitus, ought never to be entrusted to any single remedy. A regular and systematic plan of treatment should always be adopted : and though the exciting and maintaining of an abundant and general diaphoresis, be the essential—the indispensable part of the treatment ; yet this measure, important as it is, should not supersede the adoption of other remedies : which, though comparatively of inferior value, are yet, by their combined action, capable of effecting much toward the removal of the disease. I shall conclude, then, by a brief enumeration of the several remedies, which by their united operation afford the best prospect of restoring the diabetic patient to the enjoyment of health.

First : When the disease is recent, and the strength

not too far exhausted, blood-letting is a measure which should never be omitted. It may be necessary more than once to open a vein: the effects produced by the first operation will enable the practitioner to judge of the necessity of its repetition. Venesection will powerfully promote the action of those diaphoretic remedies to which principally the cure of the disease must be committed. Hughes was greatly relieved by a bleeding from the arm: it was followed by the tepid-bath; an immediate and decided impression was made upon the disease.

Secondly: Leeches at the epigastrium will be found in many cases a valuable remedy. In the case of Galbraith, the local bleeding was attended with considerable advantage. When there is a feeling of internal heat, and the epigastrium is tumid and tender, and when there is a sensation of fulness, with what the patient describes to be "a gnawing feel about the stomach," the application of leeches at the epigastric region will be attended with considerable benefit.

Thirdly: The bowels of the diabetic patient should every day be freely evacuated. Copious alvine discharges have the effect of diminishing the urinary secretion: this is proved by the effects of the Croton oil in the case of Hughes, and of the Colocynth pill in that of Riddal. It may be desirable in some instances to excite a temporary diarrhea by the action of purgative medicines. It will be necessary, however, to pro-

ceed with caution ; since any considerable derangement of the bowels will not fail to encrease the severity of the disease. The safest course to adopt will be that of evacuating sufficiently, without violently purging the patient.

Fourthly : The diet of those who labour under the Diabetes should be arranged with the utmost care. The process of digestion is rapidly and imperfectly performed : the stomach easily oppressed and overloaded. Food should, therefore, be given frequently, but always in very moderate quantity :—in a quantity far short of that which the craving desire of the stomach seems to demand. It would, I am sure, greatly conduce to the patient's recovery, could he be prevailed on to restrict himself to a certain portion of food at each meal, and not on any occasion to exceed the number of ounces prescribed. The articles of diet which I have found to agree best, are broiled meat, soup, bread, well-boiled rice, and gruel. Fish, from its tendency to create thirst and drowsiness, I cannot recommend : Potatoes I have observed frequently to disagree. As an ordinary drink, I have not known any allay thirst more effectually than the Carbonated Lime-water. Beef or veal tea, milk with Lime-water, and wine very much diluted, have also appeared to agree well.

Fifthly : Every effort must be made by remedies acting directly upon the skin to excite that organ, and re-produce its suppressed functions. The vapour or tepid bath must be used perseveringly every day, or even twice a day, until the vessels of the

surface are excited, and the cutaneous secretion restored. The frequent immersion of the feet in warm water will sometimes succeed, even after the failure of more powerful remedies. At the same time the *Pulv. Ipecac. Comp.* should be given in doses of eight or ten grains every third hour, till perspiration shall be fully established. A perspiring state of the surface should afterwards be maintained by means of warm flannel worn next the skin ; by active exercise ; and finally, if practicable, by a long residence in a warm climate. When the patient begins to regain strength, and appearances of amendment become decided, the cold bath will prove an useful tonic, and an excellent cutaneous stimulant. Under this treatment the patient will, if I mistake not, gradually recover his spirits and mental vigour, regain flesh and strength, find his thirst abate, his appetite grow less keen, and his urine improve both in quantity and quality. On the patient's own resolution and perseverance, much of the cure will depend : he must fully cooperate with his medical attendant. It would not be easy to name a remedy less irksome to the individual, or less injurious to the constitution, than daily and active exercise ; and if any remedy can diminish the liability to relapse, this, I am persuaded, will. The patient should, therefore, be particularly warned of the danger of laying aside too hastily a plan of treatment, which tends at once to remove the symptoms of the disease, and to guard against the danger of relapse.



**A CASE**  
**OF AN**  
**UNUSUALLY LARGE ANEURISM**  
**OF THE**  
**RIGHT AXILLARY ARTERY,**  
**IN WHICH**  
**THE SUBCLAVIAN ARTERY WAS TIED.**

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**BY CHARLES H. TODD,**

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HOSPITAL, &c.**

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**JOHN DUNDAS**, aged 35 years, a robust and healthy looking man, by occupation a labourer, was admitted into the Richmond Surgical Hospital on the 21st day of January, 1822, having an unusually large Aneurism in the axilla of the right side.

The Aneurism not only distended the axilla so as to cause the scapula to project considerably

backwards, but it was particularly prominent anteriorly, its base extending upwards to the clavicle, which was much elevated; inwards to the edge of the sternum, downwards to the nipple of the breast, and on the side of the thorax to the upper edge of the sixth rib. The tumour was tense, elastic, and pulsating; the skin felt stretched upon it, but was not discoloured; slight pressure did not give pain; however, the patient complained of a deeply seated uneasiness, which he referred more to the middle of the humerus than to the tumour.

The entire limb was œdematous, and the elbow was separated to a great distance from the side. The joints of the wrist and fingers were remarkably loose; the muscles of the fore-arm and hand were completely powerless; and although shooting pains extended down the arm to the ends of the fingers, the sense of touch below the elbow was lost, and the skin might be severely pinched without producing any sensation. The patient said he was certain the application of an hot iron to the hand or fore-arm would not give pain. No pulsation could be distinguished in the radial or ulnar arteries of the diseased limb, and it had not sustained any remarkable alteration of temperature.

The patient stated himself to have been uniformly a very healthy and temperate man. Early in June 1821 he felt a stiffness and numbness in the fourth and little fingers of the right hand, and at the end

of that month he was unable to close these fingers along with the others, when shutting his hand, or grasping; then the hand became swelled, and in the course of a few weeks, the swelling and loss of feeling extended to the arm. At this time he was unable to use the arm, but it was not until October that he perceived a tumour in the axilla; he admitted, however, that it might have existed there long before without his knowledge. When he first discovered the tumour it was not much larger than an hazel nut, and he paid but little attention to it, until alarmed by its rapid increase, and by the pain which the weight and pressure of the arm upon it produced. He then obtained admission into the Fermanagh Infirmary, and was thence recommended to me by Mr. Ovenden, surgeon to that establishment.

On the day after Dundas's admission into the Richmond Hospital, I found him suffering much local pain and general uneasiness, which he ascribed to fatigue after his long journey (more than one hundred miles), and to want of rest for several nights; I therefore directed for him such medicines as I thought calculated to allay constitutional disturbance, and to produce sleep. Those remedies, together with a low diet, and confinement to an horizontal posture, afforded some alleviation of pain for two days only; on the 25th of January the pain of his arm was so intense, and the size and pulsation of the tumour were so much increased, that it was found expedient to have recourse to venesection, and to

exhibit large opiates. From this period his pulse was seldom under one hundred in a minute, his breathing occasionally oppressed ; and so little relief, even of a temporary nature, was obtained from rigid abstinence, copious and repeated blood-letting, &c. that my colleagues and I decided on the necessity of tying the subclavian artery with as little delay as possible. To this alternative my patient assented without hesitation ; and having been favoured with the assistance of several professional friends, I proceeded to perform the operation on the 8th of February ; the particulars of which I shall now detail as briefly as possible.

The patient was placed on a table, lying on his back, with the upper part of his thorax somewhat raised ; his head and neck inclined to the left, and his right shoulder as much as possible depressed by an assistant steadily drawing down the arm of that side. A slightly curved incision was made through the common integuments across the lower part of the neck, commencing about two inches above the acromial, and terminating half an inch above and to the outer side of the sternal extremity of the clavicle. The convexity of this incision was downwards, so that by a little dissection of the integuments upwards, a small flap was made, which afforded ample room for the subsequent stages of the operation, and evinced the inutility of a more extensive, or a more complicated division of the skin.

The next part of the operation consisted in di-

viding the platisma myoides, fascia, and subjacent cellular tissue; this occupied a considerable time, in consequence of the great number of veins which it was found necessary to secure with ligatures. The external jugular, and two or three other superficial veins were easily secured, but a series of more deeply seated veins proved extremely troublesome; one branch of these in particular poured out blood in an alarming quantity, and receded so much within the layers of the fascia, that I was at last compelled to use the needle, and to include in the ligature the portion of fascia with which the divided vein was connected.

I feel it incumbent on me here to state, that this profuse discharge of venous blood was chiefly the consequence of the veins having been divided too near the large trunk into which they opened; the blood therefore flowed freely in a retrograde direction from the subclavian vein into them, and issued from their inferior orifices; the bleeding from their superior orifices was inconsiderable and easily controlled. To have tied these veins individually, before dividing them, would have been an undertaking both tedious and difficult to execute, for they constituted a most intricate plexus of convoluted vessels imbedded in cellular tissue and layers of fascia.

The venous hemorrhage having been at last effectually suppressed, I proceeded to search for the omohyoideus muscle: so much however was the relation of parts altered by the magnitude of the tumour,

and consequent elevation of the clavicle, that the portion of this muscle expected to be brought into view in this stage of the operation, was situated more than an inch below the clavicle; and it was found necessary to draw it up from its concealment, and to cut it across, that the subjacent parts might become accessible.

Having applied my finger to the edge of the scalenus anticus, I was directed by it to the situation of the artery; but at this juncture causes of further difficulty arose, chiefly from the great depth of the wound, and the doubt which the almost total absence of pulsation in the artery naturally excited in regard to its identity. It is necessary however to observe, that this obscurity in the pulsation of the subclavian artery was by no means referrible to the debility or exhausted state of the patient, but probably depended on the vessel having been flattened upon the first rib by the degree of extension to which the aneurismal tumour in the axilla had subjected it.

For some time I could not be convinced that the feebly pulsating vessel, to which the point of my finger was applied, was really an artery of such magnitude as the subclavian; and, aware of the disappointments which others were reported to have sustained in this operation,\* I resolved to satisfy myself

\* See Sir Astley Cooper's case in *Lon. Med. Review*, vol. 11. and Doctor Rutherford's account of M. Dupuytren's unsuccessful

and my assistants upon a point of so much importance, before a ligature should be applied. The depth of the wound rendered it impossible to see to the bottom of it, accordingly I kept the point of my left fore-finger on the vessel, and cautiously detached it from its connexions with the blunt extremity of a director; having then introduced the fore-finger of my right hand also into the wound, I succeeded in compressing the vessel between the ends of my fingers, when the pulsation of the tumour immediately ceased, returning when the pressure was discontinued. This expedient was conclusive, and, for obvious reasons, more satisfactory than that of pressing the artery downwards against the first rib.

From the unusual degree of displacement of the clavicle, it was expected that great difficulty would

ful operation at the Hotel Dieu, in *Edin. Med. and Surg. Journal*, No. 63.

An eminent English Surgeon, then on a professional tour, was present at M. Dupuytren's operation and dissection, and favoured me with an account of them, which corresponds with that given by Dr. Rutherford. In the same letter (dated June 21, 1819,) he states that, "three days since a surgeon of great celebrity attempted this operation, on a most admirable subject, and in an early stage of axillary aneurism, but he could not even find the vessel, and abandoned the operation."

Mr. Samuel Cooper informs us, that one of the cervical nerves may be mistaken for the subclavian artery, in consequence of the pulsation of this vessel being communicated to all the adjacent parts; and that he has seen a mistake of this kind actually made by very skilful surgeons. *First lines of the Practice of Surgery*, vol. 1, p. 319.

have arisen in the application of the ligature to the artery ; I was therefore provided with the several instruments which have been recommended to facilitate this step of the operation, however none of these were employed, as the object was speedily effected with a common aneurism needle. At first I attempted to pass the needle in front of the artery, with the view of giving every security to the vein ; to this the position of the clavicle constituted an insuperable obstacle ; I therefore directed the needle along the margin of the scalenus, and then insinuated the point of it under the artery from behind, guarding the vein with the fore-finger of my left hand, until the point of the needle was sufficiently elevated. I was then enabled to seize the ligature with the extremities of my fore-fingers, which I had introduced into the wound, nearly in the same manner as when compressing the artery, and the needle being held by an assistant, one end of the ligature was drawn out anteriorly, and the needle was removed.

The artery then lay upon the ligature ; and I requested that my assistants, and such other professional gentlemen as could conveniently approach the table, should convince themselves of this fact, by making the most accurate examination. The knot was now tied, and a sufficient tightness ensured by the ends of the ligature having been passed in the ordinary way through the *serre-neud*. On the ligature being tightened, the pulsation of the tumour entirely subsided ; its tension was consi-



derably diminished, and the patient felt an increased degree of numbness of the arm; the external wound was then dressed, and he was laid in bed with the limb supported on a pillow by his side.

Although my patient was an hour and an half on the operation table, and had lost a large quantity of venous blood, he appeared but little exhausted; and the strength of his pulse and usual florid appearance of his countenance were in a few minutes quickly restored. For about two hours after the operation he suffered a slight degree of dyspnœa, which spontaneously subsided.

Two hours before the operation Dundas's pulse was 112.—The temperature of the aneurismal limb at the hand was 89°, that of the opposite limb was 86°. In six hours after the operation the pulse had risen to 120—the temperature of the aneurismal limb was 92°, and that of the other was 98°. At this time he complained of little pain or uneasiness, but was restless; an opiate was accordingly administered, which, for the first time since his admission into hospital, produced tranquil and refreshing sleep.

On the following day he was free from any alarming symptom. The tumour was obviously diminished, and without pulsation. The temperature of the limb operated on had risen four degrees, and his pulse remained as yesterday. Towards night the dyspnœa recurred, which was

immediately relieved by venesection. For a few days we were alarmed by an occasional return of difficult breathing and a sense of suffocation ; on one occasion these symptoms continued for some hours, and were accompanied with a severe pain in the tumour, extending to the side of the chest ; the patient at the same time complained of palpitation, but the pulse continued regular, and was not remarkably accelerated. These symptoms were subdued by frequent blood-letting and digitalis draughts. His bowels were disposed to inactivity, and it was found necessary to have recourse to purgative pills almost every day. By pursuing this plan of treatment for several days, my patient's amendment became evident ; the symptomatic fever succeeding to this painful and tedious operation was inconsiderable, and he expressed himself as having experienced great relief.

On the 14th of February the wound was dressed for the first time ; the sutures were removed ; the discharge was small in quantity and healthy.

On the 15th several of the ligatures, which had been applied to the veins, came away with the dressings ; the œdema of the upper part of the arm had greatly subsided, and the patient felt a prickling sensation extending from the axilla to the fingers. No pulsation could be distinguished in any of the arterial trunks of the limb : the temperature of the hand continued at 96°, and the pulse was 92.

On the 18th (the 10th day) the ligature, which had been applied to the artery, was found loose in the wound, and was removed. During the two preceding days the patient complained of more soreness in the wound, and a larger quantity of pus was discharged from its cavity than hitherto. On the 16th he had a febrile paroxysm, ushered in with a severe rigor, and terminating with a profuse perspiration, and an increased discharge from the wound on the morning of the 17th.

From this period Dundas has suffered no constitutional disturbance of importance ; his strength is not impaired, and his pulse seldom exceeds 84.—The wound has healed to a single point, which still discharges a few drops of matter ; a probe introduced into this opening passes for about an inch upwards under the skin of the neck. The tumour is so much diminished that the clavicle and scapula have resumed their natural positions ; and when he sits or stands erect, the arm hangs parallel to his side. The basis of the tumour has receded fully two inches from the edge of the sternum, and from the nipple of the breast, and some space exists between the back part of the tumour and the posterior fold of the axilla. He is now (March 20th) enabled to raise the arm, but he has no power over the muscles of the fore-arm or hand ; and the joints of the wrist and fingers are still unnaturally loose. The œdema has entirely subsided, and the integuments of the arm and upper part of the fore-arm have recovered an healthy feel and appearance.

As yet, however, the skin of the hand is thickened and corrugated, as if it had been long immersed in poultices; the sense of feeling is not returning, and there is no pulse at the wrist. The patient complains sometimes that the lancinating pains through the arm and ends of the fingers are very severe, and he now and then suffers from an obtuse pain in the tumour and in the middle of the humerus.

Dundas' general health is remarkably good, and his rest uninterrupted; his appetite for food is very great, which he is most anxious to indulge: any excess however in this way, is followed by increased frequency of pulse, and uneasiness in the arm; and as he is of a constipated habit, he requires on such occasions the aid of active purgatives. He now walks daily in the garden of the Hospital, his arm being suspended in a sling, and generally appears in good spirits; at the same time he expresses disappointment at not having recovered the perfect use of his hand.

During the last week no perceptible reduction has taken place in the tumour. It is still large, and prominent anteriorly, but particularly so, when the arm hangs by the side. How this case will ultimately terminate, it would be presumptuous to conjecture, in the present state of our experience in operations on the subclavian artery; but so far as it has gone, I trust it will be received as a strong testimony in favour of the expediency of this operation, even under circumstances of peculiar difficulty and danger.

*May 3, 1822.*

P. S. Since the foregoing statement was transcribed for publication, Dundas's amendment has been most satisfactory ; the tumour is still further reduced, and he is gradually regaining the power of the muscles which move the arm on the scapula. The joints of the wrist and fingers have lost much of the unnatural laxity, and the integuments of the hand no longer possess the diseased appearances, reported on the 20th of March.

**CASES**  
**OF**  
***PARTIAL INVERSION OF THE UTERUS***  
**SUCCESSFULLY TREATED**  
**BY LIGATURE.**

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**BY CHARLES JOHNSON, M. D.**

**MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.**

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**MRS. M.** æt. 20, by the advice of her medical attendants in the country, came to the neighbourhood of Dublin for the benefit of sea-bathing, in July, 1820, at which period I saw her for the first time, and was made acquainted with the following particulars :

Since the birth of her first child, (a period of more than fourteen months) she had been subject to a constant mucous discharge, tinged with blood, from the vagina ; during this time the catamenia were unusually frequent and profuse, and the slight,

est exertion brought on an attack of uterine hæmorrhage.

From the combined effects of these causes the patient was reduced to a state of great debility. She was literally unable to walk across her room, and was obliged to be carried from her bed to her sitting-room. She had perspirations at night, and occasional attacks of diarrhœa; she was emaciated in the extreme, and her lips and cheeks were completely bloodless.

She stated that after the birth of her child considerable pain and difficulty attended the removal of the placenta, and that since she had never been entirely free from a sense of weight and a discharge either of mucus or of blood. Whilst in the country, she had been treated for menorrhagia and leucorrhœa, with bark, acids, and the cold bath. About six months before she came to town, Dr. Clarke, who was consulted by letter, recommended that an examination per vaginam should be made; this was accordingly done by her medical attendant in the country, without however his having ascertained the real nature of her disease. Having learned so much of the history of the case, I proposed an examination per vaginam, to which the patient refused to submit, assigning as a reason, that it had not, on a former occasion, been attended with any advantage. After some time, however, finding herself every day becoming weaker, I was again sent for, and an exa-

mination having been permitted, I found a tumour descending into the vagina, of the size and shape of a pear, having its neck surrounded by the os uteri. Though pressure on the tumour was attended with pain, yet it did not seem much more sensible than the adjoining part of the vagina. Dr. Clarke was called upon to see her, and considering the tumour to be polypus uteri, we agreed upon its removal by ligature. The tumour was easily included in the ligature, but so much pain was produced each time it was tightened, that, after a few days, it was thought advisable to make a second examination; and it was then ascertained that this was a case of partially inverted uterus. As it appeared to be indispensably necessary for the patient's safety, that some measure calculated to check the discharges should be adopted, the ligature was continued: and by proceeding cautiously to tighten it, in three weeks the tumour came away, which proved to be the fundus uteri inverted, with the fallopian tubes.—The portion of the uterus removed is now in the museum of the College of Surgeons.

After the first week this lady's amendment was rapid. She returned to the country, and in two months was able to make a journey of fifty miles in one day without being fatigued.

In about a year after, I had a visit from the mother of my patient, who told me, that for a few



months after her daughter's return to the country she suffered some disquietude on account of the absence of the catamenia, but that she had then no further apprehensions, having menstruated twice lately.

It must not be inferred from what has been stated, that to include the uterus in a ligature is devoid of danger. In the case above related, the tightening of the ligature was always attended with violent pain, nausea, and vomiting; and on two occasions there was so much reason to apprehend peritoneal inflammation that I should have removed the ligature, had not the patient assured me she had suffered similar attacks of pain and tenderness of the belly while in the country, which always yielded to fomentations, and purgative medicines.

The constitutional disturbance which followed the application of the ligature in this instance was so considerable, that Dr. Clarke was of opinion, that it would be more prudent, in similar cases, to apply the ligature merely with a view to restrain the uterine discharges than for the purpose of speedily removing the inverted tumour; and if at any time the uterus should be completely inverted, that it might be easily removed by the knife, as was done in the case related by him in the 2d volume of the Edinburgh Medical and Surgical Journal. On this principle I applied a ligature last November, in another case of partial inversion of the uterus, where the size and shape of the tumour were much the same as in the former.

Mrs. B——, 27 years of age, complained that for the last six years she had laboured under profuse leucorrhœal discharge, with frequent attacks of hæmorrhage, so violent as to reduce her to a state of great debility; the slightest exertion being followed by an increase of hæmorrhage. Her feet and legs were œdematous, and she resembled a person in the last stage of consumption. In addition to these symptoms, there was a tumour in the abdomen, which was evidently an enlargement of the left ovary. She dated her present indisposition from the birth of her last child, which took place in January 1816. For the first month after her confinement she suffered principally from retention of urine, but as soon as she began to walk about hæmorrhage commenced. She had consulted at different periods several professional men, who, without making an examination per vaginam, prescribed general remedies. Rest, the horizontal position, and dilute sulphuric acid, gave a temporary check to the violent discharges, but these always returned whenever she resumed the erect position. Having ascertained that there was a chronic inversion of the uterus, similar to that described in the preceding case, I applied the ligature on the 19th of November. When tightened it produced considerable pain, and on the morning of the 20th I found that she had passed an uneasy night, and was labouring under retention of urine.

Hoping that the uneasiness of which she complained might have been produced by the distention of the bladder, the catheter was passed. On the following day, however, finding that she had a second restless night, that the retention of urine continued, that she complained of pain in the back and side of the abdomen, and that the pulse was accelerated ; I judged it prudent to remove the ligature till these symptoms should subside.

I was not without hope, that as the discharge had become putrid the vessels might have undergone a sufficient degree of pressure to check the hæmorrhage. This hope however was not permanently realised. After three weeks the hæmorrhage returned, and Mrs. B——, nothing intimidated by the pain she had endured, requested that the ligature should be again applied.

The Surgeon General was now requested to visit her ; and the plan of treatment which I had adopted having met with his approbation, the ligature was re-applied on the 24th. On the morning of the 25th I was sent for, as she had suffered during the night from retention of urine ; however, before my arrival she had passed water, and was then free from uneasiness.

27th. The discharges are become putrid ; the liga-

ture was this day tightened ; it produced considerable pain, which was relieved by the exhibition of an opiate.

30th. The ligature was again tightened, and it was found necessary to repeat the opiate.

January 2d. Considerable fever, head-ache and loss of rest, but no pain or tenderness of the belly ; the vagina and pudenda were excoriated, which produced great distress on the slightest motion. Directions had been given to inject warm water several times a day into the vagina, to remove the putrid discharge ; this was not done with sufficient care, and the neglect of it appeared to have been the cause of her present distress. Particular attention was now paid to this point ; the purgative medicine was repeated, and an anodyne draught given at bed-time.

3d. This morning she is free from fever ; the irritation in the vagina has almost entirely subsided. I did not however think it prudent to tighten the ligature sooner than the 6th, and from that time it was tightened every second day, until the 12th, when the canula came away, and the tumour, which was found lying in the vagina, was removed, and proved to be the fundus uteri and Fallopian tubes. Since that period the progress of her recovery has been uninterrupted. A

larger portion of the uterus was removed in this than in the former case.

In a month after this operation, she was able to walk abroad every day; was free from all discharges, and rapidly regaining her strength: she then removed to the country, and I have not since heard of her.

An examination per vaginam is the only certain means of diagnosis in cases such as the foregoing; and the consideration that long continued and profuse discharges, which resist the ordinary remedies, will generally be found to depend on organic disease, or displacement of the uterus, affords an additional argument in favour of this method of examination.

The lady, whose case was first related, was attended in her confinement by a respectable practitioner in the country, who made an examination some months previous to my seeing her, without being able to discover the nature of the case; hence it was concluded that it could not be an inversion of the uterus, and the tumour was deemed a polypus, which had not passed the os uteri at the time he examined, but which subsequently descended into the vagina.

It will not be difficult to distinguish inversion

from every other displacement of the uterus, the directions for this purpose being sufficiently accurate ; but the rules generally adopted for forming a diagnosis between polypus and a partially inverted uterus, are less to be relied upon. The best authors allege that we may detect a difference by attending to the following particulars, viz. that in polypus the os uteri encircles the tumour, while in inversion of the uterus, the os uteri forms a part of the tumour itself. Now in both the cases of inverted uterus above related, the os uteri surrounded the neck of the tumour, and the erroneous opinion I formed in the first case was confirmed by following the directions given for the purpose of assisting our diagnosis.

Mr. Newnham, in his Essay on this subject, has pointed out at considerable length the uncertainty of distinguishing between polypus and inverted uterus, and being of opinion that we have no means of distinguishing between these diseases, he enters into an enquiry how far they admit of a similar mode of treatment.

The following circumstances will, I believe, in general serve as marks of distinction. In the partially inverted uterus the neck of the tumour will be found attached in its entire circumference to the inner surface of the cervix uteri, and the finger cannot be passed further than half an inch within the os uteri, at any side of the tumour

In polypus, on the contrary, the finger may, in most cases, be passed along the neck of the tumour for a considerable depth into the cavity of the uterus.

It is said that an inverted uterus is sensible to the touch, while polypi, on the contrary, are void of feeling. This can never be an accurate mode of forming a diagnosis, as we can only judge of the sensibility of the tumour by the expressions of the patient, which are regulated more by disposition than by the extent of her sufferings. I lately attended a lady with uterine polypus, and had I judged solely by the complaints of my patient, I should have pronounced the polypus to be more sensible than an inverted uterus usually is.

The tightening of the ligature, however, produces very different effects in the two diseases; indeed so slight is the pain caused by including a polypus in the ligature, that I cannot help thinking, that in many of the cases where alarming and even fatal symptoms are said to have succeeded the removal of polypi, the tumour must have been an inversion of the uterus such as I have described.

Marc. A. Petit, of the Hotel Dieu at Lyons, was the first continental writer who recommended the ligature to be applied in cases of chronic inversion of the uterus. He mentions that an eminent surgeon tied an inverted uterus of three years' standing, supposing it to be a polypus, and by that

fortunate mistake rescued the woman from the lingering death which threatened her. Since that period this mode of treatment has been adopted in several cases, and in every instance the result was equally fortunate.

I have already had occasion to refer to a case that occurred to Dr. Clarke of this city, so far back as the year 1803, by which he has clearly proved, that the partially inverted uterus will bear the pressure of the ligature, and what is of much more consequence, that such pressure is capable of restraining the discharges, although it may not be practicable to continue it sufficiently long to effect the removal of the tumour.

Under these circumstances it is surprising to find it asserted by the authors, whose writings are in most general circulation, that in these cases we can only palliate symptoms, and must suffer our patients to linger out the remainder of their lives without being able to afford them any effectual relief.

Dr. Denman, when treating of chronic inversion of the uterus, makes use of these words: "All that art can do in such cases is to alleviate their sufferings, to moderate symptoms, and sometimes to support the perpending uterus by a flat pessary."

Mr. C. Mansfield Clarke, to whom we are indebted for much useful information on the subject of diseases of females, makes the following observa-



tion : " In a case where the uterus has been long inverted, and lies in the vagina, it will not be advisable to recommend any other remedy than the injection of some very mild astringent fluid three or four times a day into the vagina. Some restraints will thus be placed upon the quantity of the discharge, and the parts will be kept clean by it."

All the French writers on midwifery doubt the possibility of removing the inverted uterus. This is strangely inconsistent with their practice of cutting away a portion of the scirrhus uterus.

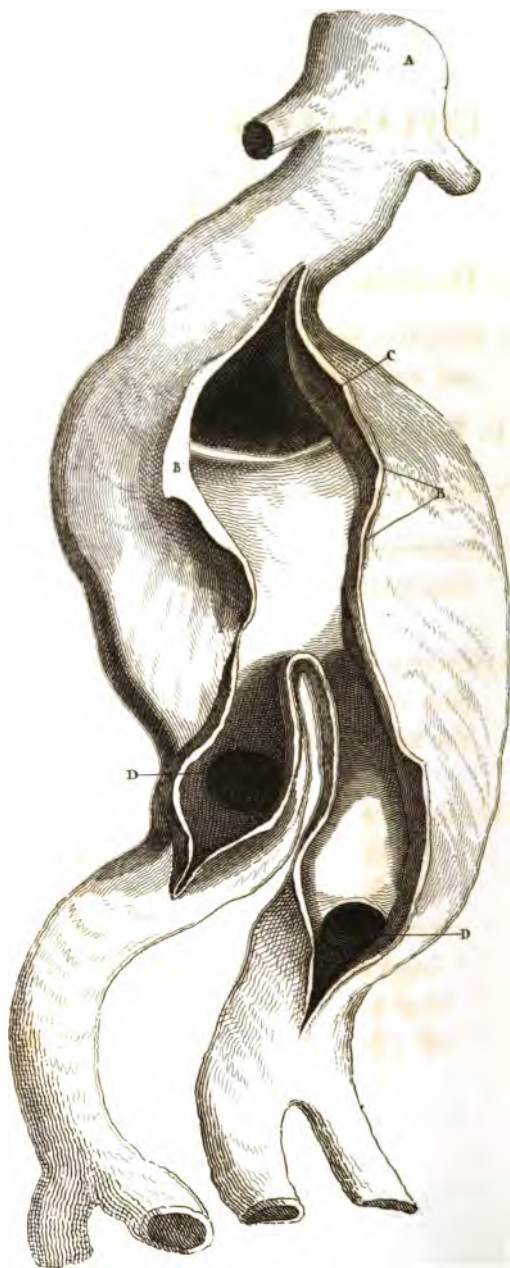
The cases published by Mr. Newnham and Mr. Windsor have fully proved the possibility of removing the partially inverted uterus, consistently with the safety of the patient ; and the probability of success is now sufficiently established to render it advisable to resort to the ligature whenever the life of the patient is endangered, or her health materially injured by the profuse discharges.

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#### ERRATA.

Page 354, line 8 from the bottom, *for* caused *read* cured.  
375, line 5, *for* on *read* or.





## EXPLANATION OF THE PLATES.

## PLATE I.

- A. The aorta.
- B. Primitive iliac arteries dividing into their internal and external branches.
- CC. Emulgent arteries.
- D. Superior mesenteric.
- E. Aneurismal sac cut open, shewing it completely continuous with the canal of the aorta.
- F. Superior aperture leading off from the posterior part of the sac into the compressed portion of the aorta and iliac arteries behind.
- GG. Inferior apertures of communication between the sac and iliac vessels, that on the right side being completely continuous with the artery at its lower margin, that on the left being only a circular opening. This is more distinctly observed in the posterior view given in plate II.

## PLATE II.

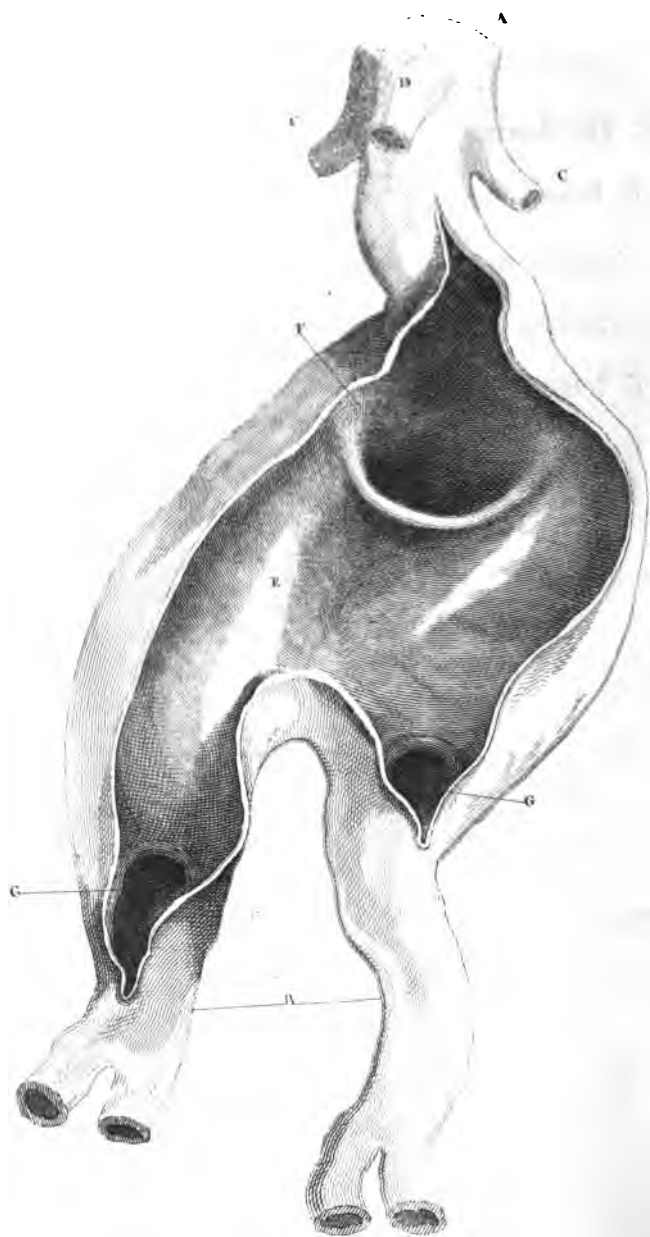
- A. The aorta seen on its posterior surface.
- BB. Its cut edges turned back, shewing its canal quite flattened.
- C. The superior aperture of communication between it and the sac.
- DD. The inferior apertures of communication between the iliacs and sac.











## PLATE III.

A. The Aorta.

BB. Renal arteries.

C. Superior mesenteric artery.

D. Primitive iliac arteries.

EE. Internal iliacs.

FF. External iliacs.

G. Aneurismal sac cut open.

H. The wall of the sac, which is here very thick ; its strong cellular coat appears to be a little detached from the thick layer of lymph which forms the rest of its structure.

I. The circular aperture, which forms the communication between the aorta and sac ; a probe is passed from the aorta into the iliac trunk, the mouth of which appears flattened.

K. Two apertures by which the sac communicates with the external iliac artery ; a narrow band separates them.

L. The left common iliac trunk cut open ; the probe is continued from it into the external iliac : this communication is now nearly obliterated.

## PLATE III. CONTINUED.

M. A small aneurism arising from the aorta, and in its progress detaching

N. The cellular coat from

O. The inner coats of the artery. From this we may conceive how the blood bursting the fundus of the sac might make its way through the inner coats into the artery again, rather than dilate the cellular one.

THE END.

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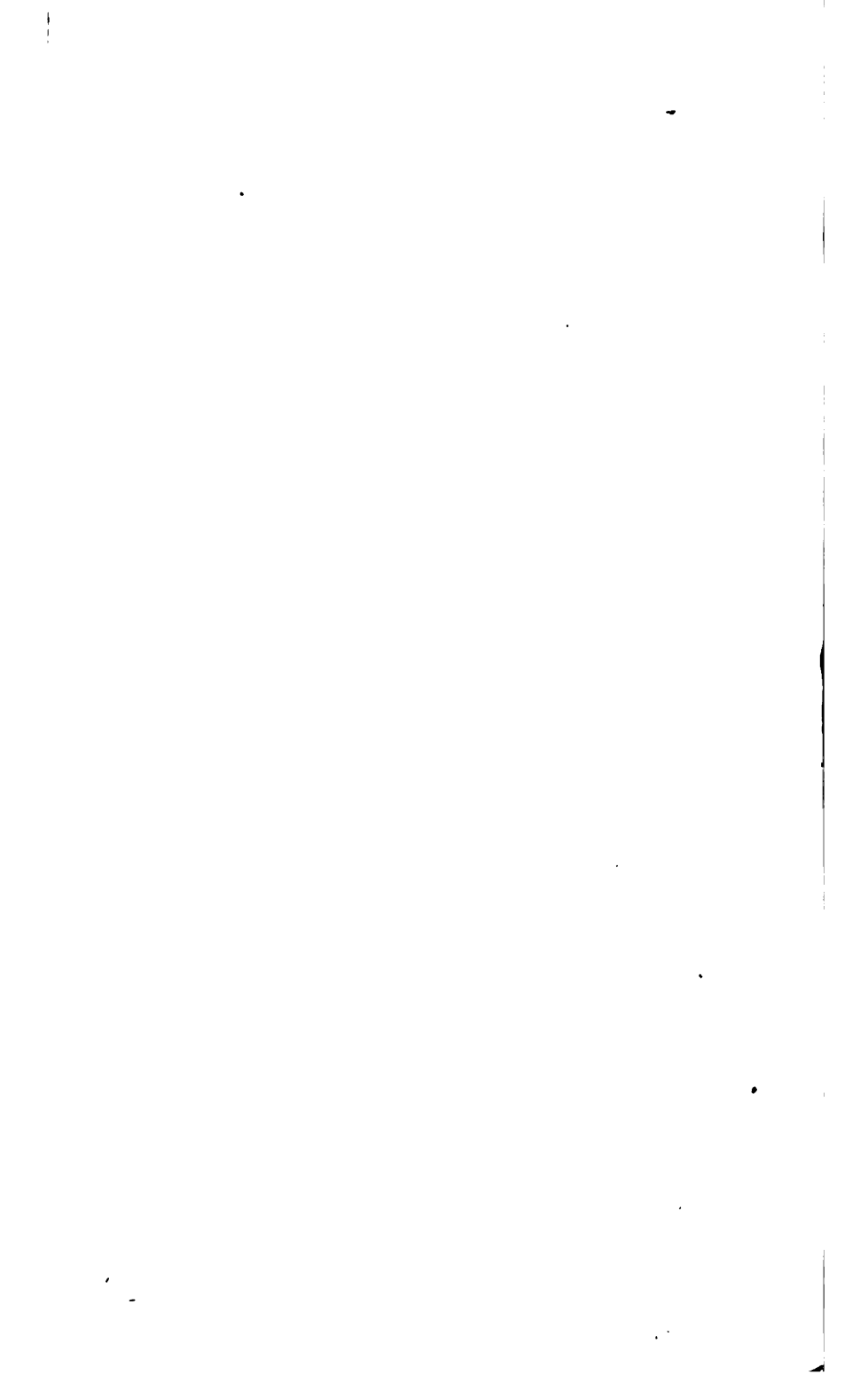
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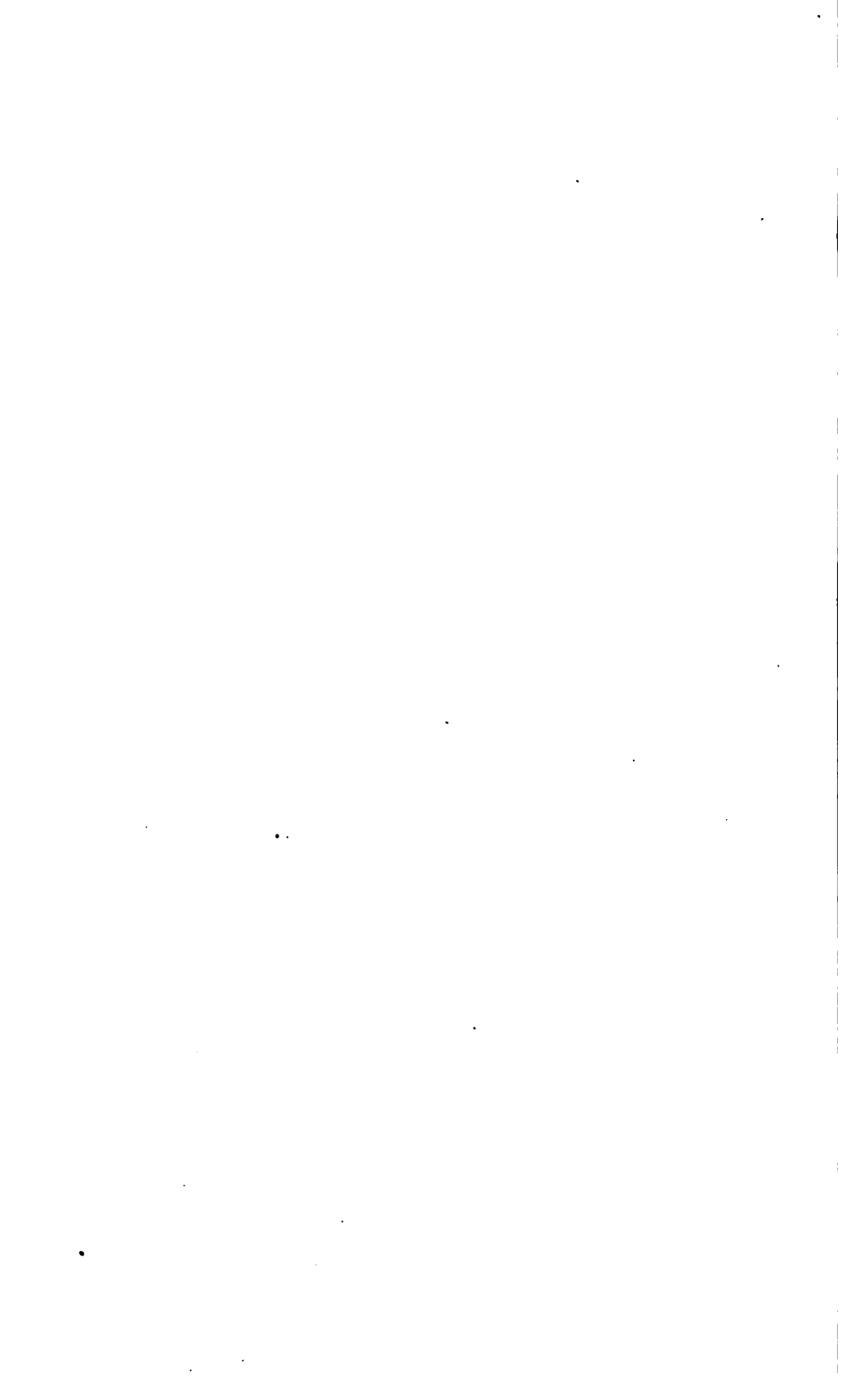
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